



KINDERGARTEN I

Mathematics

Teacher's Guide

2018/2019

Term 2

FOREWORD

This is a pivotal time in the history of the Ministry of Education and Technical Education (MOETE) in Egypt. We are embarking on the transformation of Egypt's K-12 education system starting in September 2018 with KG1, KG2 and Primary 1 continuing to be rolled out year after year until 2030. We are transforming the way in which students learn to prepare Egypt's youth to succeed in a future world that we cannot entirely imagine.

MOETE is very proud to present this new series of textbooks, Discover, with the accompanying digital learning materials that captures its vision of the transformation journey. This is the result of much consultation, much thought and a lot of work. We have drawn on the best expertise and experience from national and international organizations and education professionals to support us in translating our vision into an innovative national curriculum framework and exciting and inspiring print and digital learning materials.

The MOETE extends its deep appreciation to its own "Center for Curriculum and Instructional Materials Development" (CCIMD) and specifically, the CCIMD Director and her amazing team. MOETE is also very grateful to the minister's senior advisors for curriculum and early childhood education. Our deep appreciation goes to "Discovery Education," "Nahdet Masr," "Longman Egypt," UNICEF, UNESCO, World Bank Education Experts and UK Education Experts who, collectively, supported the development of Egypt's national curriculum framework. I also thank the Egyptian Faculty of Education professors who participated in reviewing the national curriculum framework. Finally, I thank each and every MOETE administrator in all MOETE sectors as well as the MOETE subject counselors who participated in the process.

This transformation of Egypt's education system would not have been possible without the significant support of Egypt's current president, His Excellency President Abdel Fattah el-Sisi. Overhauling the education system is part of the president's vision of 'rebuilding the Egyptian citizen' and it is closely coordinated with the ministries of higher education & scientific research, Culture, and Youth & Sports. Education 2.0 is only a part in a bigger national effort to propel Egypt to the ranks of developing countries and to ensure a great future to all of its citizens.

WORDS FROM THE MINISTER OF EDUCATION & TECHNICAL EDUCATION

It is my great pleasure to celebrate this extraordinary moment in the history of Egypt where we launch a new education system designed to prepare a new Egyptian citizen proud of his Egyptian, Arab and African roots - a new citizen who is innovative, a critical thinker, able to understand and accept differences, competent in knowledge and life skills, able to learn for life and able to compete globally.

Egypt chose to invest in its new generations through building a transformative and modern education system consistent with international quality benchmarks. The new education system is designed to help our children and grandchildren enjoy a better future and to propel Egypt to the ranks of advanced countries in the near future.

The fulfillment of the Egyptian dream of transformation is indeed a joint responsibility among all of us; governmental institutions, parents, civil society, private sector and media. Here, I would like to acknowledge the critical role of our beloved teachers who are the role models for our children and who are the cornerstone of the intended transformation.

I ask everyone of us to join hands towards this noble goal of transforming Egypt through education in order to restore Egyptian excellence, leadership and great civilization.

My warmest regards to our children who will begin this journey and my deepest respect and gratitude to our great teachers.

Dr. Tarek Galal Shawki
Minister of Education & Technical Education

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How to Use This Guide



The Mathematics teaching guide is designed to support teachers in the preparation and implementation of learning activities by providing clear, step-by-step instructions embedded with teacher input, instructional strategies, and classroom management techniques. In these learning activities, students explore, play, use manipulatives, move their bodies, communicate and collaborate with colleagues, ask and seek answers to questions, and practice new skills and concepts.

This instructional approach aims to help students accomplish the following goals:

- Build early numeracy
- Discover connections between and among math concepts
- Develop foundational computational skills
- Acquire and use math vocabulary
- Build awareness of measurement concepts and geometric shapes
- Enhance critical thinking, problem solving, collaboration, and communication
- Increase enjoyment of math

If instructors have not used such a guide before, some practical advice follows:

- Read each chapter carefully. Make notes and highlight important details.
- Take particular note of sections labeled **Term**, **Chapter**, or **Lesson Preparation**.

These sections include steps the teacher will need to complete in order to implement the activities in the term, chapters, and lessons. Advance preparation will ease the instructor's workload and ensure successful learning experiences for students.

- Gather the necessary materials and make any preparations before implementing the lessons.
- Consider additional classroom management techniques necessary for your particular class and learning environment.

Please note that for this term the math journal is a standalone Student Book. The math journal is referenced throughout the teacher's guide. Students will draw, write, and complete math activities in their journals.

- Math journals are a wonderful resource for informally assessing student progress. They can help the instructor determine whether or not students are successfully learning and applying new skills and concepts. They can also provide critical information about the kinds of mistakes students are making. That information can be used to plan future instruction and differentiation.
- Take note of the following:
 - What are the pupils discovering or learning? (Content)
 - What are the students being asked to do? (Activity)
 - What is the teacher discovering about the pupils? (Assessment)
 - How could you adapt the lesson for the different abilities in your class? (Differentiation)
- During and after implementing each lesson, reflect and make notes on what was successful and possible suggestions for improvement.
- Planning with another teacher can often lead to greater implementation success as it provides an opportunity to discuss classroom expectations and management procedures and ensures that lessons are differentiated to better suit the needs of students. It is suggested that teachers meet with other instructors at least weekly to plan and reflect.

Background

In this Teacher Guide, Mathematics instruction is divided into Chapters. Each Chapter includes 10 days of instruction. The teaching of mathematics and the building of numeracy is very linear, with students learning new content in increments, and adding to their conceptual development and understanding slowly over time.

Mathematics lessons are organized into three components:

- Calendar and Movement (15-20 minutes)
 - During this daily routine, students develop number sense, early place value concepts, counting fluency and problem-solving skills. Students explore quantity and practice counting through patterns and movement.
- Learn (25-30 minutes)
 - During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction and practice.
- Share (5-10 minutes)
 - During this daily routine, students develop their ability to express mathematical ideas.

Some Instructional Considerations

Each section should be implemented every day. However, in some cases, students may need a few more minutes for one section and another section (or two) will have to be shortened for that day. The instructor should use personal judgment and knowledge of students and their needs.

Story problems and numbers are provided as examples. The instructor can use the story and numbers provided or create stories of their own. If the numbers in a story problem or sample problem are changed, be sure to limit the quantities to those identified in the indicators and outcomes (for example, “within 10”). The instructor is encouraged to incorporate familiar counting songs, poems, rhymes, math stories/literature and math games and activities that are not included in this Teacher Guide.

[Learn more about Education 2.0](#)



Instructional Strategies



The instructional strategies described are woven throughout the Teacher Guide. These are not meant to be the only methods used in the classroom, rather are highlighted as best practices for engaging students in active, inquiry-based learning. As teachers and students gain familiarity with the strategies, instructors may wish to modify and personalize to suit the needs of each individual classroom.

For more strategies visit: tinyurl.com/Edu2-0strategies

INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Attention Getting Signal	Teacher uses an explicit signal to get the attention of the class when they are talking in pairs or working in groups. There are many options for signals, and more than one can be used as long as students recognize it. Options include a clap pattern that students repeat, a simple call and response phrase, or a hand in the air (see: Hand Up). This strategy allows teachers to ask for students' attention without shouting or immediately disrupting student conversations.
Brainstorm	Students provide multiple answers for an open-ended question. This can be done as a whole class or in groups or pairs. The purpose of a brainstorm is to list many answers, not to critique whether answers are realistic, feasible, or correct. Once an initial broad list is made, students can go back to answers to prioritize or eliminate some options. This strategy promotes creativity and problem solving.
Calling sticks	Teacher writes names of students on popsicle sticks and places them in a can/jar. To call randomly on students, the teacher pulls a stick from the jar. After calling on the student, the teacher places that stick into another can/jar so that student is not immediately called on again. This strategy helps teachers call on a wide variety of students and encourages all students to be ready with an answer.
Count Off	Teacher breaks students into groups by having students count off to a certain number. It's important to tell students to remember their number. For example, if the teacher wants three groups, the first student counts one, the next student says two, the next says three and the next student starts over at one, etc. When all students have counted, tell all the number ones to meet together, all the number twos and then all the number threes. This strategy enables time-efficient grouping and reinforces conceptual number use.
Fishbowl	Students gather around a teacher or group of students who are modeling something new. The students observe carefully as if they are watching fish in a bowl. This strategy promotes full attention of students even when individual students are not actively participating in the demonstration.
Four corners	Each of the four corners of the room corresponds to a possible opinion about a thought-provoking statement. Teacher may post a picture or a prompt in each corner of the room to represent the opinions/statements. Students walk to the corner that interests them or expresses their opinion to group with other like-minded students. This strategy allows students to express opinions and to prepare justifications with others who agree before presenting to the class.
Gallery Walk	As if in a museum, students walk past displays and respond to questions or prompts about the display. This strategy can be used in multiple ways, including to consider ideas posted on chart paper around the room or to view classmates' final products. This strategy encourages diversity of thought. When used at the end of a project, this strategy allows students to celebrate and take pride in their work while also honoring and responding to others' work.

INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Hands Up	Teacher holds a hand in the air to signal that students should stop what they are doing, stop talking, and look up at the teacher. When students notice the teacher's hand up, they also raise a hand to signal to classmates. This strategy is used as an attention getting signal.
Hands Up, Pair Up	Students stand and walk around the room quietly with one hand raised in the air. The teacher says "Stop--Pair Up". Students clap hands and stand together with a nearby student. Anyone with a hand still up needs a partner. Students can easily find each other and pair up.
I Do, We Do, You Do	I Do: Teacher demonstrates or models an action to take place, such as reading a passage to the students. We Do: Students repeat the action with the teacher, such as re-reading a passage in unison. You Do: Student practices the learned action without the guidance of the teacher. This strategy supports students by modeling an expectation, allowing for low-pressure practice, then providing opportunities for independent practice.
Imagine That	Teacher describes a person, animal, plant, or situation for students to act out. Students imagine that they are the living thing or are in the situation and act out what happens. This can also be done in groups with a student, or rotating students, acting as the leader. This strategy promotes imagination and long-term memory. (See also: Charades to add a guessing element.)
I See Very Clearly	Teacher tells students he/she sees something. Students guess what it is as teacher gives students clues. Students use observation and listening skills to guess correct object. This strategy emphasizes use and identification of object properties and characteristics.
Lean and Whisper	Students lean one shoulder in toward one neighbor to answer a question that has a 1-2-word (or short) answer. This strategy engages all students in answering a question without disrupting the flow of the classroom. This is used for KG1 students as a specific type of the "Shoulder Partner" strategy.
Model	The teacher or student demonstrates exactly how to complete a task. The rest of the class can ask questions before repeating what was demonstrated. This strategy allows the teacher to review any safety concerns or difficult aspects of a task, as well as share advice for task completion. This method should not be used for some inquiry activities, as it could over-influence the direction of student thinking.
Number Sign	Teacher can check for understanding quickly by asking a question and giving students a choice of answers. Students hold up one, two or three fingers in response to the question asked. Teacher quickly scans the fingers raised to get a sense of how many students are tracking the material.
One Stay One Stray	After working with partners, one person stays with the work product to present to other students while the second partner walks around and listens to peers in the class share. Then the two students switch roles. Using the strategy, both partners get to share their project and listen to others share.
Popcorn	Call on one student to answer a question. After the student has answered the question, they say "popcorn" and say the name of another student. It is now the turn of that student to answer the question, then pick a new student, and so on. If a student has responded, they should not be called upon a second time during the same popcorn activity.
Shake It Share It High Five	Students move around the classroom until teacher signals to stop. Students then partner with a nearby student. Partners shake hands, share ideas or work products, then high five before moving around again to find a new partner. This strategy gets students out of their seats and moving, while also allowing them to share with classmates they don't sit near.








INSTRUCTIONAL STRATEGY NAME	BRIEF DESCRIPTION
Shoulder partners*	Students lean and talk quietly with the person sitting next to them. Shoulder partner can be used literally to just talk to the people sitting on either side, or for slightly larger groups of 3-4 -with everyone's shoulders "touching" (this promotes the ability to speak softly - in sort of a huddle). *See "Lean and Whisper" and "Turn and Talk" for further breakdown for KG1.
Think Aloud	The teacher models a process of thinking by speaking aloud what is thought. As an example, "I think I need more color here in my drawing." This strategy models for students the type of thinking they can use in an upcoming activity.
Think Time	Teacher allows a distinct period of silence so that students can process tasks, feelings, and responses. Allow students 15-30 seconds to think to themselves before calling on anyone to provide an answer to the class.
Thumbs Up	Teacher can quickly check for understanding using this strategy. Students hold thumbs up for agreement and thumbs down for disagreement to a question asked by the teacher. Thumbs up can also be used as a way for students to signal to a teacher that they are ready for an instruction.
Turn and Talk	Students turn "knee to knee" and "eye to eye" with a shoulder partner to discuss answers to long-form questions. This strategy allows students to discuss ideas, reflect on learning, and check each other's answers. This is used for KG1 students as a specific type of the "Shoulder Partner" strategy.
Venn Diagram	Teacher draws two or more large overlapping circles as a graphic organizer to show what is the same and different about multiple topics. Teacher notes similarities in the overlapping section of the circles, then summarizes differences in the respective parts of the circles that do not overlap. This strategy allows students to visually see and record similarities and differences.
Wait Time	Similar to the think time strategy, the teacher waits at least 7 seconds after asking a question to the whole class or after calling on a student to respond. This provides time for students to think independently before an answer is given out loud.
Whisper	Teacher can provide whole class verbal processing time by allowing students to respond to a question by whispering the answer into their hands. This strategy prompts every student to attempt an answer, with no social-emotional recourse if their answer is wrong.
Zoo Can	Similar to Calling Sticks, the teacher pulls a name stick from the can and the students must count backwards while acting like an animal. This can be used for relevant content instruction or as a quick break when students need to move and laugh before finishing a task or moving on to a new task.

Mathematics Scope and Sequence for Term 2

MATH	CHAPTERS 1-3	CHAPTERS 4-6
COUNTING AND CARDINALITY		
Compare two numbers between 1 and 10 presented as written numerals.		X
Use ordinal numbers (first, second, third, etc.) to describe objects up to 5 (fifth).	X	
OPERATIONS AND ALGEBRAIC THINKING		
Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.	X	X
Add and subtract within 10 using strategies such as <ul style="list-style-type: none"> • using objects or drawings to represent a problem • decomposing numbers into pairs in more than one way (e.g., $5=2+3$ and $5=4+1$) • finding the number of objects that make 10 when added to any number 1-9 	X	X
Employ units of money until 10 Egyptian pounds in addition and subtraction problems.	X	X
NUMBERS AND OPERATIONS IN BASE TEN		
Compose and decompose 10 using objects, drawings, etc.	X	X
MEASUREMENT		
Collect and classify data using objects and drawings (up to 10).	X	
Classify objects into given categories (for example length, weight, size, color) and sort categories by count.		X
Recognize different units of money, including 1 Egyptian pound, 5 pounds, 10 pounds.	X	X
GEOMETRY		
Describe objects in the environment using names of shapes.	X	
Correctly use terms such as above, below, beside, in front of, behind, and next to.	X	
Correctly name 2-dimensional shapes (triangle, circle, rectangle, square).	X	
Compose larger shapes by combining simple shapes.	X	
Match and sort 3-dimensional shapes.	X	

Digital Resources Available For Use

Teachers are encouraged to use resources from the Egyptian Knowledge Bank as digital learning objects. Visit www.ekb.eg to access thousands of resources from the world's top education publishers.

NO.	CLIP TITLE	DESCRIPTION	CLIP TITLE	QR CODE
1	Length - Part 1	"Explains how to describe the length or height of various objects using the words short, long, high, and tall."	https://plu.sh/vfyed	
2	Position Words: Inside/Outside/ and on/under	Learn the meaning of inside, outside, on, and under, and discover how to use them to describe the position of something, or where something is.	https://plu.sh/a4fch	
3	Position Words: in front of/ behind and to the right of/to the left of	Learn how to describe the position of an object next to another object and using the words behind, in front of, to the left of, and to the right of.	https://plu.sh/3aydg	
4	Counting Set 7,8,9	Learn to count Sets containing numbers of elements that add up to 7 and 8 and 9.	https://plu.sh/7egan	
5	Comparing Unequal Sets	Learn to compare between two unequal sets using the symbols for greater than, less than, and equals.	https://plu.sh/e96c4	
6	Comparing Sets	Learn to classify objects into named sets according to what they are, their size, and color.	https://plu.sh/39erf	
7	The Concept of Zero	Learn that Zero means nothing. Examples like a fishbowl demonstrate the Concept of Zero—it has Zero fish in it. We also learn that zero can be considered the first number when we count: 0, 1, 2, 3, ...	https://plu.sh/a97tx	

Lesson Preparation Template for Education 2.0

Grade (KG): _____ Class: _____ Date: _____ Absent: _____ Students' total number: _____

Content / Windows	Theme	Chapter / Topic	Lesson / Activities	Learning outcomes	Activities	Teacher's Choices						
						Teacher Guide Pages guide	Teaching strategies	Questions / Modeling	Digital resources	Differentiation / Challenges	Math Journal	Enrichment
Multidisciplinary												
Mathematics												
XX												
English												
XX												

Teacher's Self Reflection	<input type="checkbox"/>	Exceeds expectations	<input type="checkbox"/>	Meets expectations	<input type="checkbox"/>	Sometimes Meets Expectations	<input type="checkbox"/>	Below Expectations	<input type="checkbox"/>
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KINDERGARTEN I




Mathematics

Chapter 1

Lessons 61–70

Overview

Lessons 61–70

COMPONENT	DESCRIPTION	TIME
 Calendar and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15-20 minutes
 Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25-30 minutes
 Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from colleagues' perspectives.	5-10 minutes

Learning Indicators

Throughout lessons 61–70, students will work toward the following learning indicators:

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - using objects or drawings to represent a problem;
 - decomposing numbers into pairs in more than one way (e.g., $5 = 2 + 3$ and $5 = 4 + 1$);
 - finding the number of objects that make 10 when added to any number 1–9.

NUMBERS AND OPERATIONS IN BASE TEN:

- Compose and decompose 10 using objects, drawings, etc.

GEOMETRY:

- Describe objects in the environment using names of shapes.
- Correctly use terms such as above, below, beside, in front of, behind, and next to.
- Correctly name 2-dimensional shapes (triangle, circle, rectangle, square).

LESSON	INSTRUCTIONAL FOCUS
61	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Write numbers from 1 to 10.• Decompose numbers within 10 into two groups.• Determine whether two quantities are equal.
62	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Compose and decompose 10 using manipulatives.• Identify equal groups.
63	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Compose and decompose 10 using manipulatives.
64	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Compose and decompose 10 using manipulatives.
65	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Compose and decompose 10 using manipulatives.
66	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Compose and decompose 10 using manipulatives.
67	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Name 2-dimensional shapes (triangle, circle, rectangle, square).• Model 2-dimensional shapes (triangle, circle, rectangle, square) using their hands.• Describe the position of an object using the terms above and below.
68	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Model 2-dimensional shapes (triangle, circle, rectangle, square) using their hands.• Describe and demonstrate the position of an object using the terms above and below.

69

Students will:

- Participate in Calendar Math activities.
- Describe and demonstrate the position of an object using the terms above, behind, below, and in front of.

70

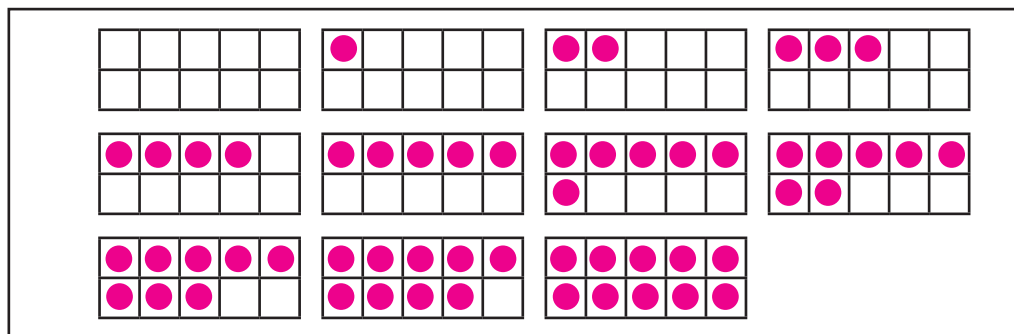
Students will:

- Participate in Calendar Math activities.
- Describe and demonstrate the position of objects using the terms above, below, in front of, behind, next to, and beside.

Term Preparation

Note to Teacher: The following items will be used in some form throughout Term 2. Careful preparation of them in advance is necessary for successful implementation of daily lessons.

- Gather sets of 10 objects to use as counters to show ways to make 10. You will need one set per student. Examples include beans, dry pasta, small stones, math counters, connecting cubes, two-sided counters, plastic bottle caps, or coins.
- Create ten frame sets for numbers 0 to 10. Make enough for each student to have one set. Students will use these in **Lesson 64** and throughout Term 2.



Chapter Preparation

- In **Lesson 62**, students will practice decomposing numbers into two equal groups (within 10). You will need the following materials for the lesson:
 - Two large poster papers with a mountain drawn on each
 - 10 goat cutouts
 - Tape and glue/glue stick
 - * You will tape the goats onto the mountains. You will be moving them. Students will need glue/glue sticks for their work.
 - Large poster paper for each student with two trees drawn on it
 - Fig cutouts
- Students will be practicing decomposing even numbers into two groups. Students who are ready can work with 8 or 10 figs. Students who need more practice can work with 4 or 6 figs. Plan accordingly so you create the appropriate number of fig cutouts. Alternatively, you can cut out circles to represent figs.

- In **Lesson 66**, students will color, cut out, and glue 10 monkeys onto 2 trees to decompose 10 into two groups.
 - Create a handout for each student with 10 monkeys to color and cut out.
 - Draw 2 trees on large sheets of paper (one per student).
 - Make a copy of the monkeys and trees for yourself. Your version can be larger than the students' version.
 - Create cards for vocabulary word wall: equal, above, below, beside, in front of, behind, and next to.
- In **Lessons 67–70**, students will use the story “Sun to River” to review shapes and learn and practice positional words.
 - Preview the story (see Lesson 67).
 - Using poster board or chart paper, create a story board for the activity as follows:
 - * Draw a river flowing from one side of the page to the other
 - * Draw a small bridge over the river
 - * Draw a tree in the picture
 - * Draw a sun in the sky
 - * Draw, color, and cut out a rectangle, triangle, circle, and square that will fit in the picture.
 - Create sorting shapes (pattern blocks or those brought in from home).
 - Create a tree on chart paper to use to demonstrate the terms above, below, beside, in front of, behind, and next to.

Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

- **Calling Sticks**
- **Shoulder Partner**
- **Lean and Whisper**
- **Turn and Talk**
- **Attention Getting Signal**
- **I Do, We Do, You Do**
- **Think Time**
- **Wait Time**
- **Thumbs Up**
- **Role Play**
- **Pair/Share**
- **Shake it Share it High Five**
- **Whisper**

Materials Used

Calendar math area



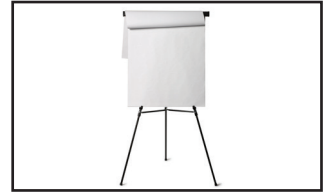
Crayons



Math journal and pencils



Chart paper



Markers



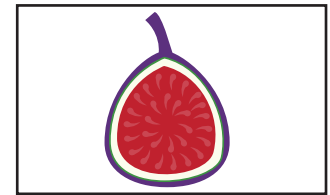
Vocabulary cards



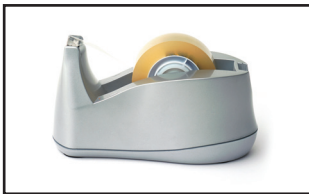
Goat cutouts



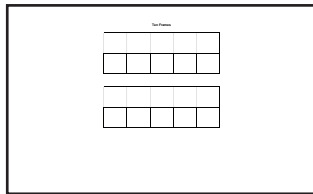
Fig cutouts



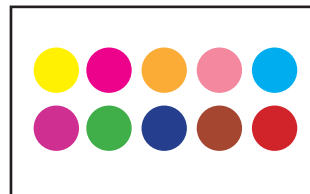
Glue or tape



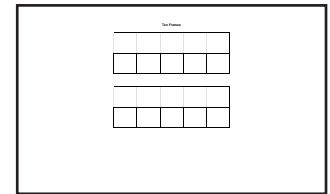
Ten frame and 10 dots



10 Dots of different colors



Sets of ten frames for 0 to 10



Student sets of counters



Ball



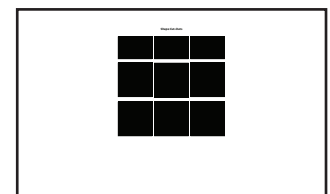
Teacher set of large dot cards

Student sets of dot cards

Scissors



Shape cutouts



Monkey handout

Handout of 2-dimensional shapes

"Sun to river" storyboard

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Count from 1 to 10. • Write numbers 1 to 10. • Decompose numbers within 10 into two groups. • Determine whether two quantities are equal. 	<ul style="list-style-type: none"> • Equal 	<ul style="list-style-type: none"> • Calendar Math Area • Math journals and pencils • Crayons • Vocabulary card for equal with illustration • Chart paper • Markers



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Use **Calling Sticks** to select a student to be Calendar Helper.



STUDENTS DO: Selected student comes to the front of the class to help the teacher.

TEACHER SAY: _____ (Student's name) is going to help us with our calendar math.

TEACHER DO: Let the student helper walk the class through the routine. They should do the following and ask their colleagues to repeat:

- Say the current month.
- Say the current day of the week.
- Say all of the days of the week in order.
- Point to the date on the calendar.
- Say today's date in a sentence, "Today is (current day) the (current date) of (current month) (year)."

TEACHER SAY: Let's thank our calendar helper today as they sit down. Can you all say, "Thank you, _____ (student's name)?"



STUDENTS DO: Thank the calendar helper.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to practice counting while reaching up and down. We will stand, reach up and count, then reach down and count.

TEACHER DO: Model reaching up and down while counting to 10. Repeat as needed to help students learn the pattern.

TEACHER SAY: Everyone stand and count with me. We will count to 10 three times.



STUDENTS DO: Count aloud and reach up and down with the teacher three times.

TEACHER SAY: Good work. Give your **Shoulder Partner** a high five and a low five, then have a seat.



STUDENTS DO: Give **Shoulder Partner** high five and low five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display the vocabulary word card: equal.

TEACHER SAY: Does anyone know what it means when we say “fair share?” Raise your hands if you think you know.



STUDENTS DO: Raise hands to respond.

TEACHER DO: Call on two or three students to share their thinking. Then explain fair share.

TEACHER SAY: A fair share is when we distribute something evenly. No one has more. No one has less. In math, we call that having an equal amount. Give me a **Thumbs Up** if you can give me an example of a fair share or sharing equally.



STUDENTS DO: Give a **Thumbs Up** if they have an example. Selected students share their examples.

TEACHER DO: Confirm accurate examples and correct inaccurate examples shared by students.

TEACHER SAY: Some things cannot be shared equally because some numbers cannot be divided into equal groups. There is more of one and less of the other. For example, pretend I have 3 candies. Can I share them fairly with _____ (student's name)? Can I share all of the candies so that we each have an equal amount?

TEACHER DO: Use counters or objects as needed to help students understand.

TEACHER SAY: No, we cannot share 3 candies equally between 2 people. One of us would get 1 candy and the other would get 2. That is not equal. One special number that can be split into two equal groups is 10.

*Note for the Teacher: This activity uses the **I Do, We Do, You Do** instructional strategy.*



2. TEACHER DO: Write numbers 1 through 10 on chart paper. Hand out crayons and math journals and have students open their journals to the first blank page.



STUDENTS DO: Open journals to the page for **Lesson 61**.

TEACHER SAY: Please write the numbers 1 through 10 in your journals.



STUDENTS DO: Write numbers 1 through 10 in their journals.

TEACHER DO: Circulate around the room helping where needed. Use **Attention-Getting Signal** when all students are complete. Point to the numbers on the chart paper.

TEACHER SAY: Help me point to each number on my chart paper and count aloud from 1 to 10.



STUDENTS DO: Point and count aloud with the teacher.

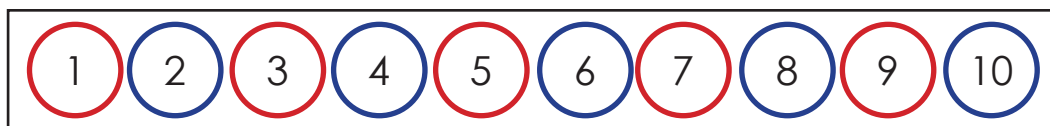
TEACHER SAY: Now point to and count aloud the numbers you wrote in your math journal.




STUDENTS DO: Point to and count aloud the numbers in their math journals.


3. TEACHER SAY: We have written 10 numbers. Now I am going to do something special with my numbers. I am going to create a pattern. First, I will pick two different colors. I am going to choose red and blue (choose any two colors you prefer). I am going to circle my numbers with my two different colors to make a pattern. Watch me.

TEACHER DO: Circle each number, alternating colors.



 **STUDENTS DO:** Observe as the teacher creates a color pattern.

TEACHER SAY: I made a pattern using red and blue. Let's count how many red circles I have. 1, 2, 3, 4, 5. I have five red circles. Let's count how many blue circles I have. 1, 2, 3, 4, 5. I have five blue circles. Now you make the same pattern with red and blue in your math journal.

 **STUDENTS DO:** Circle each number in their math journal, alternating between red and blue.

TEACHER SAY: Count your red circles and show me on your fingers.

 **STUDENTS DO:** Count red circles and show 5 fingers.


TEACHER SAY: Count your blue circles and show me on your fingers.

 **STUDENTS DO:** Count blue circles and show 5 on fingers.

TEACHER SAY: We used two colors – red and blue – and made a group of red numbers and a group of blue numbers. There are 5 red numbers and 5 blue numbers. Are those two groups equal?


 **STUDENTS DO:** Respond to the question.

TEACHER SAY: Yes, there are 5 in each group. The groups are equal. 5 red and 5 blue make 10. If I had 10 candies, I could share them fairly with another person. I'm going to draw a smiley face next to ten because I can make two equal groups. You draw a smiley face, too.

 **STUDENTS DO:** Draw a smiley face next to 10 in their journals.

4. TEACHER DO: Write numbers 1 through 9 on the board.

TEACHER SAY: Write numbers 1 through 9 in your math journal.


 **STUDENTS DO:** Write numbers 1 through 9 in math journal.

TEACHER SAY: We have written 9 numbers. Now I am going to pick two different colors. I am going to choose green and orange (choose any two colors you prefer). I am going to circle my numbers and make a pattern. Watch me.

TEACHER DO: Circle each number, alternating colors.



TEACHER SAY: Now use the same colors and make a pattern in your math journal.

 **STUDENTS DO:** Circle the numbers 1 to 9 in alternating colors in their math journals.

TEACHER SAY: I made a pattern using green and orange. Let's count how many green circles I have. 1, 2, 3, 4, 5. I have 5 green circles. Let's count how many orange circles I have. 1, 2, 3, 4. I have 4 orange circles. Are 5 and 4 the same? Do I have an equal amount of green numbers and orange numbers? Let me think about it for a moment. You think with me.

TEACHER DO: Make thinking face and give **Think Time**. Then, ask students to respond.

 **STUDENTS DO:** Respond to the question.

TEACHER SAY: Do we have a fair share? No, because 5 and 4 are not equal. So I am going to write a sad face next to 1 to 9 because we cannot make two equal groups.



STUDENTS DO: Write sad face next to numbers 1 through 9 in their journal.

TEACHER SAY: Now I will write numbers 1 through 8. You do the same.



STUDENTS DO: Write numbers 1 through 8 in math journal.

TEACHER SAY: We have written 8 numbers. Now I am going to pick two different colors. I am going to choose brown and purple (choose any two colors you prefer). I am going to circle my numbers and make a pattern. Watch me.

TEACHER DO: Circle each number, alternating colors.



TEACHER SAY: Now use the same colors and make a pattern in your math journal.



STUDENTS DO: Circle the numbers 1 to 8 in alternating colors in their math journals.

TEACHER SAY: We made a pattern using brown and purple. Let's count how many brown circles we have. 1, 2, 3, 4. We have 4 brown circles. Let's count how many purple circles we have. 1, 2, 3, 4. We have 4 purple circles. Do we have an equal number of brown numbers and purple numbers?



STUDENTS DO: Count along with teacher. Say yes or nod in agreement.

TEACHER SAY: Yes, we have 4 brown numbers and 4 purple numbers. We can divide 8 fairly into two equal groups. That makes me happy, so I will mark this set of numbers with a smiley face. Let's try 6. Write number 1 to 6 in your math journal.



STUDENTS DO: Write numbers 1 to 6 in math journal.

TEACHER SAY: Now I want you to see if you can make a fair share of 6. Pick 2 colors and make the pattern.



STUDENTS DO: Pick two colors. Circle 1 to 6 alternating colors.

TEACHER SAY: Now, count to see if we can make two equal groups out of 6. If you made equal groups out of 6, show me a smile. If you could not make equal groups out of 6, show me a frown.



STUDENTS DO: Count each color. Smile or frown.

TEACHER SAY: I see lots of smiles. We were able to make a fair share out of 6. So, mark that set of numbers with a smiley face.



STUDENTS DO: Draw a smiley face next to 6 in their journals.

TEACHER SAY: Now you will do this next number on your own. The last number I want you to try on your own is 4. Think about what we have done so far and figure out if we can make a fair share out of 4. Write the numbers 1 to 4, then pick two colors and circle your numbers. Finally, count them and show me a smile or a frown.



STUDENTS DO: Write 1 to 4 in math journal. Pick two colors. Circle 1 to 4 alternating colors. Count each color. Show a smile or frown.

TEACHER DO: Walk around the room to see that students create and notice two equal groups. Confirm that 4 can be divided fairly into two equal groups.



Share (5 minutes)

Directions

1. TEACHER SAY: Today we made fair shares of numbers. We could not make a fair share of the number 9. What are some other numbers that we cannot make a fair share with? You can use your fingers to test your thinking.

TEACHER DO: Give ample **Wait Time**.

TEACHER SAY: **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Turn and Talk** to **Shoulder Partner**.

TEACHER DO: Give ample time for students to discuss. Use **Attention-Getting Signal**.

TEACHER SAY: You and your **Shoulder Partner** talked about numbers that cannot be fairly shared. Show me on your fingers a number you talked about.



STUDENTS DO: Show a number discussed with **Shoulder Partner**.

TEACHER SAY: Raise your hand if you would like to share.



STUDENTS DO: Raise hands to show they want to share.

TEACHER DO: Choose students with their hands up to answer the question. Allow several students to share as time permits. Confirm or correct their thinking. Use fingers, drawings, or objects as needed.

TEACHER SAY: You have all done very good math thinking. Turn to your **Shoulder Partner** and tell them, “Nice thinking.”



STUDENTS DO: Turn to **Shoulder Partner** and say, “Nice thinking.”

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 10 using manipulatives. Identify equal groups. 	<ul style="list-style-type: none"> Equal 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils 2 poster papers, each with a mountain drawn on it 10 goat cutouts Poster papers with two trees (one per student) An even number of fig cutouts per student (Option: Have students draw circles on their trees to represent figs) Glue or Tape
LESSON PREPARATION		
<p>See Chapter Preparation for detailed instructions:</p> <ul style="list-style-type: none"> Two poster papers with a mountain drawn on each 10 goat cutouts Poster papers with two trees (one for each student) Fig cutouts for each student 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.

TEACHER DO: Prepare for Movement Math.

2. TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY: We are going to pretend we are in an orchard with many fruit trees. We will use each hand to reach up and pick fruit, then drop it in our baskets. Make sure you count as you drop the fruit in your basket.

- Pick 4 apples from this apple tree. Drop them in your basket.
- Pick 6 lemons from this tree. Drop them in your basket.
- Pick 8 oranges from this orange tree. Drop them in your basket.
- Pick 10 figs from this fig tree. Drop them in your basket.



STUDENTS DO: Follow each direction, doing each movement the correct number of times and counting aloud.

TEACHER SAY: Fantastic. Give your **Shoulder Partner** two handshakes and then have a seat.



STUDENTS DO: Give their **Shoulder Partner** two handshakes and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display two mountains. All ten goats are on one mountain.

TEACHER SAY: There were ten little goats that lived on a mountain. The little goats loved to play on the mountaintop. Though the goats were little, they did not have enough room to skip and jump. Ten goats on a mountaintop is too crowded. We need to help these little goats share the mountain tops fairly so they all have room. Yesterday, we learned about sharing things fairly by creating equal groups. Think in your brain about how these ten goats could share the mountains equally. I am going to think, too.


TEACHER DO: Give **Think Time**. Model thinking using facial expressions and pretending to work out how to divide the goats.

TEACHER SAY: Now **Turn and Talk** to your **Shoulder Partner** and discuss how the goats can have more room to play. How can we have these ten goats share the two mountains equally?

 **STUDENTS DO:** **Turn and Talk** to **Shoulder Partner** and discuss how the goats can have more room to play.

TEACHER DO: Give ample time for students to discuss.

TEACHER SAY: Raise your hand if you would like to share what you and your **Shoulder Partner** discussed.


 **STUDENTS DO:** Raise hand to show they want to share.

TEACHER DO: Call on three students to share. If students answer correctly, confirm their thinking by checking their work. If not, begin moving goats one at a time to the second mountain, asking each time if the ten goats are divided equally between the two mountains.

TEACHER SAY: If I move one goat to the second mountain, do I have equal groups of goats? Are they sharing the mountains fairly? What should I do?

 **STUDENTS DO:** Respond to the questions.

TEACHER DO: Continue process until you have created two equal groups of five. Once you have five goats on each mountain, have students count with you to confirm there are equal groups.

 **STUDENTS DO:** Respond to the teacher's questions. Tell the teacher when there are two equal groups of goats. Count the goats aloud with the teacher to confirm there are equal groups.

TEACHER SAY: Wonderful. Thank you for your help. Now, I need your help solving another problem. You are going to make your own fair share of figs on two trees. Each of you will get a paper with two fig trees and some figs to glue onto them. I want you to create equal groups of figs on each tree. You may have a different number of figs than your **Shoulder Partner**, so when I give you your figs, be sure to count them.


Note to the Teacher: If a student struggles with the concept of sharing fairly or equal groups, give them a smaller number of figs. Have them distribute each item one by one until all are evenly distributed, then go back and count. If a student is advanced, you can give them more figs to distribute.

TEACHER DO: Hand out materials. Make sure each student gets an even number of figs.

 **STUDENTS DO:** Count figs.

TEACHER SAY: Once you have counted your figs, think about how to make equal groups. Raise your hand when you have made equal groups and are ready to glue. Count carefully. Have your **Shoulder Partner** check your work.

TEACHER DO: Hand out materials. Help students as needed. Check work. Write students' names on the back of their papers.

 **STUDENTS DO:** Evenly distribute the figs on the trees. Have **Shoulder Partner** check work. Raise hand to have the teacher check. Then, glue figs onto trees.



Share (5 minutes)

Directions


1. TEACHER SAY: When I say go, I want you to share your work with your **Shoulder Partner**. How many figs did you have? Talk about how you made equal groups of figs on your trees. Go.

 **STUDENTS DO:** **Turn and Talk** with **Shoulder Partner** about how they made equal groups..

TEACHER DO: Give students two minutes time to discuss. Use an **Attention-Getting Signal**.

TEACHER SAY: I will pull three names from the **Calling Sticks**. If I call your name, share your work and explain how you made equal groups.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to colleagues.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 10 using manipulatives. 	<ul style="list-style-type: none"> Ten frame 	<ul style="list-style-type: none"> Calendar Math Area Ten frame and 10 dots from previous lessons 10 dots of a different color Poster papers with two mountains from Lesson 62 10 goat cutouts from Lesson 62 Tape
LESSON PREPARATION		
<ul style="list-style-type: none"> Have ten frame from previous lessons to display. Have dots from previous lessons ready to use again. Make another set of dots in a different color. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER SAY: Let's count and clap from right to left. We will count to 10 three times.

TEACHER DO: Model clapping right to left while counting to 10. If you are facing the students, mirror what they are to do so they are counting accurately from right to left. Alternatively, stand with your back to the students so they can copy you. Repeat three times.



STUDENTS DO: Clap and count aloud with the teacher three times.

TEACHER SAY: Nice job counting and clapping. Give your **Shoulder Partner** a high five on the right and a high five on the left. Then, have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five on the right and a high five on the left, then sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display two mountains with ten goats from **Lesson 62**.

TEACHER SAY: Yesterday, we had ten goats and we made equal groups so they could share the mountains fairly. But, there were other ways that we could have distributed the goats to make ten. For example, all the goats might have lived on one mountain while no goats lived on the other mountain.

TEACHER DO: Put all ten goats on one mountain.

TEACHER SAY: Do we still have ten goats?

 **STUDENTS DO:** Count and respond to the question.


TEACHER DO: Move one goat to the other mountain.

TEACHER SAY: How many goats did I move to the other mountain?

 **STUDENTS DO:** Respond together: One.

TEACHER SAY: How many goats are left on the first mountain? Help me count.

TEACHER DO: Count the goats aloud, pointing to each one.

 **STUDENTS DO:** Count the goats aloud with the teacher.

TEACHER SAY: Nine goats are on this mountain and one goat is on this mountain. How much is nine (point to the nine goats) and one (point to the one goat)?

 **STUDENTS DO:** Respond together: Ten.

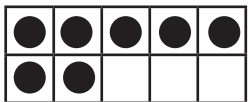
TEACHER DO: Move another goat from one mountain to the next making a group of eight and a group of two.

TEACHER SAY: Do we still have ten goats?

 **STUDENTS DO:** Count and respond to the question.

TEACHER SAY: Eight goats are on this mountain and two goats are on this mountain. You said we still have ten goats all together, so eight and two make ten.

TEACHER DO: Continue until students grasp the concept or until you have shown all of the ways to make ten.



2. TEACHER DO: Display a ten frame with seven dots. Have three dots of a different color ready to add.

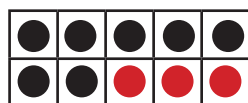
TEACHER SAY: I have seven dots in this ten frame. I will add more to make ten. Count with me.

TEACHER DO: Add three dots of a different color and count aloud.

 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: I added three dots in this ten frame. The ten frame is full. Now I have ten dots. Seven (point to seven dots) and three (point to three dots) make ten. I wonder if there are other ways to make ten.


TEACHER DO: Make thinking face and give **Think Time**.




3. TEACHER DO: Conduct the following activity for the remainder of the Learn segment.

TEACHER SAY: Let's explore some different ways to make ten. I will pull a **Calling Stick**. If I call on you, you tell me a number between zero and ten. I will put that number of dots on the ten frame in my color. Then, you will come up and add dots in your color to make ten.

TEACHER DO: Pull **Calling Stick**. Ask selected student for a number and place that number of dots on the ten frame.

 **STUDENTS DO:** Selected student says number, waits for the teacher to add that many dots to the ten frame, then adds the different-colored dots to the ten frame to make ten.

TEACHER SAY: Let's count how many dots _____ (students' name) added to the ten frame. Count with me as _____ (student's name) points to them.

 **STUDENTS DO:** Count the new dots aloud with the teacher.

TEACHER SAY: How many dots do we have all together on our ten frame?

 **STUDENTS DO:** Respond together: Ten.

TEACHER SAY: I put _____ dots on the ten frame. _____ (Student's name) put _____ dots on the ten frame. We have ten dots all together. So, _____ and _____ make 10.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about what your favorite part of math was today. Smile at me when you have an answer.

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**. Tell them what your favorite part of math time was today and why it was your favorite.

 **STUDENTS DO:** **Shoulder Partners** share.

TEACHER DO: Give ample time for students to talk. Then use an **Attention-Getting Signal**.

TEACHER SAY: Raise your hand to share what your favorite part of math time was today and why it was your favorite part.

 **STUDENTS DO:** Raise hand to share.

TEACHER DO: Call on several students with hand raised. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to colleagues.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 10 using manipulatives. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils Sets of ten frames for numbers from 0 to 10 (See Term Preparation for instructions.) Sets of 10 counters (one set per pair of students) Ten frame and 10 dots from previous lessons 10 dots of a different color
LESSON PREPARATION		
<ul style="list-style-type: none"> To prepare for this term, you created ten frames for students showing dots from 0 to 10. For this lesson, you will need enough of those ten frames to give one to each pair of students. Students will trade them several times in order to work with different numbers. Plan accordingly so you have enough ten frames. Refer to Term Preparation for instructions and examples. Draw or glue a blank ten frame in each student math journal. You may want to make more for advanced students. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY: Make sure you count as you do each movement.

- Blow 1 huge bubble and pop it.
- Blow 3 tiny bubbles and give them a tiny pop.
- Stand on one leg and hop 5 times.
- Using both legs, jump 7 times.
- Stand tall and pretend you are a water fountain. Spray water in the air with your hands 9 times.



STUDENTS DO: Follow each direction, doing each movement the correct number of times and counting aloud.

TEACHER SAY: Nice work pretending and counting. Tell your brain, "Nice imagination." Then have a seat.



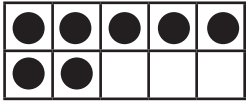
STUDENTS DO: Say, "Nice imagination," and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display a ten frame with 7 dots.

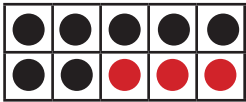


TEACHER SAY: Yesterday you helped me make ten several different ways. There are many ways to make ten. Let's count the dots on this ten frame. Count with me.

 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: This ten frame has seven dots. I will add more to make ten.

TEACHER DO: Add three dots to the ten frame.



TEACHER SAY: Count the new dots with me.


 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: Now we have ten dots. We know it is ten because the frame is full. Seven (point to seven dots) and three (point to three dots) make ten.

You are now going to work with a partner to explore different ways of making ten. You and your **Shoulder Partner** will receive a ten frame with some dots on it. You will also receive a bag of counters.

TEACHER DO: Give each pair of students a bag of counters and a ten frame (each pair can receive a different ten frame).

TEACHER SAY: First, you and your **Shoulder Partner** will count the number of dots you have on your ten frame. Then, you will add counters until you make ten.

 **STUDENTS DO:** Count dots on ten frame with **Shoulder Partner**. Add counters to make ten.

TEACHER DO: Give students time to work. Then, use an **Attention-Getting Signal**.


TEACHER SAY: Think about how you and your partner worked to make ten. I will pull three names from the **Calling Sticks** to share.

TEACHER DO: Pull three **Calling Sticks**. Give students time to share.

 **STUDENTS DO:** Share how they made ten.


TEACHER DO: For each combination of numbers students share, model the language, “_____ and _____ make ten.”

TEACHER SAY: Now we will swap ten frames with the partners nearest us. You will give them your ten frame and they will hand you theirs. Then, you and your **Shoulder Partner** will work to make ten again.

 **STUDENTS DO:** Swap ten frames. Count dots on ten frame with **Shoulder Partner**. Add counters to make ten.

TEACHER DO: Continue swapping ten frames until students have had a chance to work with several different combinations that make ten. Each time, have students report out model the language, “_____ and _____ make ten.”

 **STUDENTS DO:** Each pair of students tells their colleagues how they made ten.

 **2. TEACHER DO:** Hand out math journal, pencils, and crayons.

TEACHER SAY: I want you to think of all the many ways to make ten using two different colors. Make ten in your math journal using any two colors you choose.

 **STUDENTS DO:** Pick two different colors. Make a ten in their math journals.

Note to the Teacher: If a student struggles, give them counters to work with or draw counters in one color and have them do the rest to make 10. You may have advanced students show more than one way to make 10. Extra ten frames are included the students' journals.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about what you drew in your math journal. How did you know you had ten?

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**. Show them what you drew and explain how you made a ten.

 **STUDENTS DO:** **Shoulder Partners** share.

TEACHER DO: Give ample time for students to discuss. Then use an **Attention-Getting Signal**.

TEACHER SAY: Raise your hand to share how you made a ten in your math journal.

 **STUDENTS DO:** Raise hand to share.

TEACHER DO: Call on several students with hand raised. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to colleagues.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 10 using manipulatives. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils Ball Teacher set of large dot cards Student set of dot cards
LESSON PREPARATION		
<ul style="list-style-type: none"> Have a ball available for the “Catch and Count” Movement Math activity. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today we will play 'Catch and Count.' You will stay seated until you catch the ball. I will point to a student and count 1. That student must stand and catch the ball. Then, that student will point at a colleague and count 2. That student must stand and catch the ball, then point at a colleague and count 3. That student will stand and catch the ball, and so on. We will continue this movement and count until we reach 10. Then, we will start counting again from 1 to 10 and play until everyone is standing. Make sure you have room.

TEACHER DO: Point to a student to stand. Toss the ball and count 1.



STUDENTS DO: Catch and count until 10. Repeat until everyone is standing.

TEACHER SAY: Fabulous job catching and counting. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Hand out students' dot card sets.

*Note to the Teacher: If students need additional support, have them work with a **Shoulder Partner** on this activity. **Shoulder Partners** can share a card and talk through their solutions.*

TEACHER SAY: Today, you are going to use your dot cards to help me make ten.

TEACHER DO: Hold up the large dot card for five. Ask students to quickly tell you how many dots are on the card.



STUDENTS DO: Respond together: Five.

TEACHER SAY: I have five, but I want to make ten. Look through your dot cards and find the number you think we need to combine with five to make ten.



STUDENTS DO: Look through dot cards to find their answer.

TEACHER SAY: Each of you has a dot card. Show it to your **Shoulder Partner**. Do you have the same card? If you do not have the same card, see if you can figure out which one of you might need to try a different card.



STUDENTS DO: Show their dot cards to their **Shoulder Partners**. Partners who have different cards will work together to determine which has the correct card (if either).

TEACHER SAY: Raise your hand if you think you have the dot card that will make ten when I combine it with my five dot card.



STUDENTS DO: Raise hands if they think they have the right answer.

TEACHER DO: Call on a student to bring up their dot card.

TEACHER SAY: How many dots are on your card?



STUDENTS DO: Selected student tells how many dots are on the card.

TEACHER SAY: Let's count all the dots to see if five and _____ (student's number) make ten. Count with me.

TEACHER DO: Count the dots aloud, pointing to each one.



STUDENTS DO: Count aloud with the teacher.

TEACHER DO: If student has the correct answer, congratulate them and confirm that all students should have the five dot card out. Repeat this process for other numbers until five minutes are left in the Learn segment. Use the last five minutes for math journaling.



STUDENTS DO: Work to find dot cards that, when combined with the teacher's dot card, make ten.

TEACHER SAY: Great work today. Now, I'm going to give you your math journals. Open your journal to the page for Lesson 65 and draw two dot cards that make ten when you add them together.



TEACHER DO: Hand out math journals.



STUDENTS DO: Open journals to the page for **Lesson 65** and draw two dot cards that make ten when combined.



Share (5 minutes)

Directions

1. TEACHER SAY: We have been working on making ten using ten frames. We can see when we have ten because the ten frame is full. Today we used dot cards to make ten. How did you figure out how to make ten using the dot cards? How did you know when you had ten?

TEACHER DO: Give 30-60 seconds of **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**. Share your thinking with them.



STUDENTS DO: **Shoulder Partners** share their thinking.

TEACHER DO: Give time for students to discuss. Then use an **Attention-Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partner**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to colleagues.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 10 using manipulatives. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Poster with two trees (one per student) Monkey handout (one per student) and one set for the teacher to display Tape Glue Scissors Crayons
LESSON PREPARATION		
<ul style="list-style-type: none"> Make copies of the handout of ten monkeys (one per student). Make poster papers with two trees (one per student). Make a large teacher display of two trees and ten monkeys, five on each tree. Monkeys will be moved from tree to tree, so use tape to attach them. Display dot card matches and ten frames from previous lessons for reference. Gather scissors, glue, and crayons for student use. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY: Make sure you count as you do each movement.

- Spin around 1 time.
- Jump 2 times.
- Bend down and touch your toes 3 times.
- Reach up 4 times.
- Stretch to the right 5 times.
- Stretch to the left 6 times.
- Lean forward 7 times.
- Lean back 8 times.
- Stomp your feet 9 times.
- Tip toe in place 10 times.



STUDENTS DO: Follow each direction, doing each movement the correct number of times and counting aloud.

TEACHER SAY: That was good work. Reach your hands up and take a deep breath. As we exhale, let your arms slowly come down and make a beautiful rainbow. Now have a seat.



STUDENTS DO: Reach hands up and slowly come down, then sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display two trees with five monkeys on each tree.

TEACHER SAY: We have been learning ways to make ten. There are ten little monkeys in the jungle, swinging between two trees. Count the monkeys with me.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: Two monkeys on this tree (point to the first tree) decide to swing over to the other tree (point to the second tree).

TEACHER DO: Move two monkeys to the second tree.

TEACHER SAY: Let's count and see how many are in the second tree now (point to the second tree).



STUDENTS DO: Count aloud together to seven.

TEACHER SAY: Seven monkeys are in this tree now. Let's count and see how many are still in this tree (point to the first tree).



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: Three monkeys stayed in this tree. Seven monkeys are in that tree. Think in your brain – what do three and seven make? **Whisper** into your hand how many monkeys we have all together.



STUDENTS DO: **Whisper** their answers into their hands.

TEACHER SAY: Let's say aloud together, "Three and seven make ten."



STUDENTS DO: Respond together: Three and seven make ten.

TEACHER SAY: Good work. There are many different ways we can arrange our ten monkeys between these two trees. Now you will have a chance to do this on your own. I will give you a paper with ten monkeys for you to color, cut out, and glue. You can have your monkeys share the trees any way you like. When we have finished gluing down our monkeys, we will write the number of monkeys in each tree on the tree trunks like this.

TEACHER DO: Write the number of monkeys on each tree trunk. For example: There are three monkeys in the first tree, so write 3 on the trunk, There are seven monkeys in second tree, so write 7 on the trunk.

TEACHER SAY: Remember, your numbers can be different from mine as long as you have ten monkeys all together. How many monkeys are you going to cut and color?



STUDENTS DO: Respond together: Ten.

TEACHER DO: Complete the following steps, allowing time between each one for students to work:

1. Hand out the monkey papers.
2. Students color and cut out the monkeys.
3. Hand out the tree papers.
4. Students arrange monkeys onto their trees before gluing them.
5. Walk around and check students' work before they glue down the monkeys.
6. Students glue down the monkeys.
7. Students count the monkeys on each tree and write the number on the trunk.



STUDENTS DO: Color monkeys, cut monkeys, arrange the monkeys on the two trees, ask the teacher to check their work, glue down monkeys, write numbers of monkeys in each tree on each tree trunk.

Note to the Teacher: If students do not finish, allow them to work on their trees during the next math lesson. Display students' trees to show off their work.



Share (5 minutes)

Directions

1. TEACHER SAY: Now we will **Shake It, Share It, High Five**. When I say go, you will move around the classroom until I say stop. Then you will partner with a nearby student. You will shake hands, share work, and high five before moving around again to find a new partner. Go.



STUDENTS DO: Move around until told to stop, then shake hands, share work, and high five before moving around again to find a new partner.

TEACHER DO: Make sure everyone shares with a new partner. Assist where needed. Give students ample time to share with several partners.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Name 2-dimensional shapes (triangle, circle, rectangle, square). • Model 2-dimensional shapes (triangle, circle, rectangle, square) using their hands. • Describe the position of an object using the terms above and below. 	<ul style="list-style-type: none"> • Above • Below • Circle • Rectangle • Square • Triangle 	<ul style="list-style-type: none"> • Calendar Math Area • Math journals and pencils • “Sun to River” story board • Triangle, circle, rectangle, square cutouts • Vocabulary cards for above and below
LESSON PREPARATION		
<ul style="list-style-type: none"> • Create a story board and shapes for the story “Sun to River.” See Chapter Preparation for instructions. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let’s do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY: Make sure you count as you do each movement.

- Reach up on your tiptoes and make 1 big sun with your arms.
- Now put your arms in front of your chest and make a mountaintop. Touch your elbow to your **Shoulder Partner** so now you have 2 mountains.
- Lean back and stretch 3 times.
- Lean forward and stretch your arms out like the branches of a tree. Let the wind shake your leaves 4 times.
- Now pretend you are a frog. Crouch down and hop to 5 different rocks near the river.
- Now pretend you are that rock and curl up on the ground. Lay very still and count to 6.
- Now lay down flat like a river. Say splash 7 times.
- Stand back up tall like the sun again. Say shine 8 times because your rays are beaming sunshine down.
- Put your arms at your side and take 9 deep breaths.
- Sit down and close your eyes. Count to 10 in your brain, then open your eyes.



STUDENTS DO: Follow each direction, doing each movement the correct number of times and counting aloud.

TEACHER SAY: Nice work pretending and counting. Tell your brain, “Nice imagination.”



STUDENTS DO: Say, “Nice imagination.”



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display vocabulary words: above and below. Display story board for the “Sun to River” story.

TEACHER SAY: Today, I have two new words to add to our math vocabulary word wall. You probably have heard them before. Let’s talk about the sun in this picture. The sun is above everything. What do you know about above?



STUDENTS DO: Raise hands to share.

TEACHER DO: Accept reasonable answers. If a student offers an example that reflects misunderstanding of the term above, offer an example from the classroom.

TEACHER SAY: Let’s talk about the river in this picture. The river is below the sun and the tree. What do you know about below?



STUDENTS DO: Raise hands to share.

TEACHER DO: Accept reasonable answers. If a student offers an example that reflects misunderstanding of the term below, offer extra **Think Time** or another example from the classroom.

2. TEACHER DO: Get the triangle, square, circle, and rectangle and do the following:

- Place the triangle above the sun.
- Place the circle on the tree.
- Place the square above the river.
- Hold up the rectangle.

TEACHER SAY: What shape is this?



STUDENTS DO: Respond together: Rectangle.

TEACHER DO: Listen and watch carefully to see if students are able to identify rectangle. Note which students may need additional help.

TEACHER SAY: This is a rectangle. It has four sides and four corners. Two of the sides are long. Two of the sides are short.

I am going to tell you a shape story called “Sun to River.” The main character is Rectangle. Rectangle is looking for his friends. His friend Triangle is up above the sun. Point to Triangle. Triangle sees her friend Rectangle and calls to him, “Hello friend. I am above the sun.” Can you say that to Rectangle?



STUDENTS DO: Point to the triangle. Say, “Hello friend. I am above the sun.”

TEACHER SAY: Rectangle looks up and sees his friend Triangle above the sun. What do you think he says to her?

TEACHER DO: Give 10-15 seconds **Think Time**.



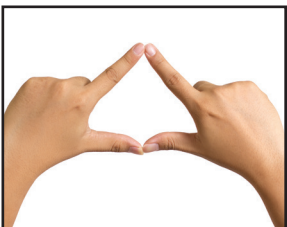
STUDENTS DO: Raise hands to share.

TEACHER SAY: Rectangle looks above and shouts, “How did you get up there above the sun, Triangle?” I wonder how she got up there. **Lean and Whisper** how you think Triangle got up there.




STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.


TEACHER SAY: Triangle looks below her and shouts, “I flew like a rocket. Now I am above the sun.” Make a triangle with your hands and shoot off in the sky above the sun.



TEACHER DO: Demonstrate holding up a triangle with fingers and flying into the sky.

 **STUDENTS DO:** Hold up a triangle with fingers and fly into the sky.

TEACHER SAY: As you fly above the sun say, “I flew like a rocket. Now I am above the sun.”

 **STUDENTS DO:** Hold up a triangle with fingers and fly into the sky. Say, “I flew like a rocket. Now I am above the sun.”

TEACHER SAY: Rectangle keeps walking along looking for his other friends. He comes to a tree. He looks above him and what does he see?

 **STUDENTS DO:** Respond together: Circle.

TEACHER SAY: Yes, Rectangle looks up and sees his friend Circle. She is above him in a tree. He asks her, “How did you get up there, Circle?” I wonder how she got there. **Lean and Whisper** how you think Circle got in the tree.

 **STUDENTS DO:** **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: Circle looks below her and says, “I bounced up here like a ball.” Pat your head if you were thinking that. Make your hands into a circle and bounce up into the tree above like a ball.

TEACHER DO: Demonstrate holding up a circle with fingers and bouncing into the tree.

 **STUDENTS DO:** Hold up a circle with fingers and bounce into the tree.

TEACHER SAY: As you bounce above say, “I bounce like a ball.”

 **STUDENTS DO:** Hold up a circle with fingers and bounce into the tree. Say, “I bounce like a ball.”

TEACHER SAY: Rectangle keeps walking along looking for his other friend. He comes to a bridge. He trots over the bridge. He looks below him into the river. What does he see?

 **STUDENTS DO:** Respond together: Square.

TEACHER SAY: Yes, Rectangle looks down and sees his friend square. She is below him in the river. He asks her, “How did you get down there, Square?” I wonder how she got there. **Lean and Whisper** how you think the square got in the river.

 **STUDENTS DO:** **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: Square says, “I was skipping across the bridge and wanted to swim, so I jumped below.” Make a square with your hands like this.

TEACHER DO: Demonstrate how to make a square with fingers. Pretend to make the square skip, then jump in water and swim around.

 **STUDENTS DO:** Make a square with fingers. Pretend to make the square skip, then jump in water and swim around.





Share (5 minutes)

Directions

1. TEACHER SAY: Think about the game we played today. We talked about shapes, but we also used the words above and below. Look around the room and give me some examples of things that are above other things.

TEACHER DO: Give 30-60 seconds **Think Time**.



STUDENTS DO: Look around the room for examples of objects that are above other objects.

TEACHER DO: Use **Calling Sticks** to select students to share things they found that are above other things. They should use the word above.



STUDENTS DO: Selected students identify an object in the room that is above another object and use the word above to describe the relative location of the object.

TEACHER DO: Praise students for their correct answers. Then use the word below to describe the object below the object they identified as being above. For example, if a student says, “The clock is above the door,” you would say, “Great job. The clock is above the door and the door is below the clock.” Repeat as many times as possible in the remaining Share time.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Model 2-dimensional shapes (triangle, circle, rectangle, square) using their hands. Describe and demonstrate the position of an object using the terms above and below. 	<ul style="list-style-type: none"> Above Below Circle Rectangle Square Triangle 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils “Sun to River” story board Triangle, circle, rectangle, square cutouts
LESSON PREPARATION		
<ul style="list-style-type: none"> Add vocabulary cards for above and below to the Math Word Wall. Familiarize yourself with the story “Sun to River” and the body motions involved. 		



Calendar and Movement (15-20 minutes)

Directions

- TEACHER DO:** Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.
- TEACHER DO:** Prepare for Movement Math. Today Movement Math is part of the Learn segment.



Learn (25-30 minutes)

Directions

- TEACHER DO:** Display vocabulary cards: above and below.

TEACHER SAY: Who can help us remember what the words above and below mean? Raise your hand if you would like to explain above or below.



STUDENTS DO: Raise hands to volunteer. Selected students explain above or below, using objects to help them explain, if needed.

TEACHER SAY: Yesterday I told you the story “Sun to River.” Soon we will **Role Play** “Sun to River” with our **Shoulder Partner** and practice our new words above and below. But, first we need to practice our motions. Watch me. I stand up tall with my hands above my head and make a big sun, bright and shining.

TEACHER DO: Demonstrate sun.

TEACHER SAY: I stand up, stretch my legs, and reach my arms out like the branches of a tree, tall and strong.

TEACHER DO: Demonstrate tree.

TEACHER SAY: For a river, I lie flat on my back with my arms above my head, long and flowing.

TEACHER DO: Demonstrate river (or ask a student volunteer).

TEACHER SAY: Let's stand and practice. Make sure you have room around you. Show me the sun above.



STUDENTS DO: Demonstrate sun.

TEACHER SAY: Good job, bright shiny suns. Stand up straight and strong. Show me tree.



STUDENTS DO: Demonstrate tree.

TEACHER SAY: Good job, tall trees. Show me the flowing, splashy river below.



STUDENTS DO: Demonstrate river.

TEACHER SAY: Good job, splashy river. Sit up and listen.



STUDENTS DO: Sit up and listen to the teacher.

TEACHER SAY: Now, I want you to show me how the triangle blasted off above the sun.



STUDENTS DO: Demonstrate motion of the triangle.

TEACHER SAY: Show me how the circle bounced above into the tree.



STUDENTS DO: Demonstrate motion of the circle.

TEACHER SAY: Now show me how the square jumped below and swam in the river.



STUDENTS DO: Demonstrate motion of the square.

TEACHER DO: Make sure that students have motions correct before beginning. Give time for students to practice the motions.

TEACHER SAY: The person with the longest hair will be Student 1. Student 1 will be the shapes first. The person with the shortest hair will be Student 2. Student 2 will be the sun, tree, and river first. Then we will all switch roles. Let's try. Listen carefully.



STUDENTS DO: Stand with **Shoulder Partner** and follow directions.

TEACHER SAY: Rectangle looks above and shouts, "How did you get up there above the sun, Triangle?" Triangle looks below her and shouts, "I flew like a rocket. Now I am above the sun."



STUDENTS DO: Student 1 stands up tall with hands above head and makes a big sun. Student 2 holds up a triangle with fingers and flies into the sky and says, "I flew like a rocket. Now I am above the sun."

TEACHER SAY: Rectangle looks up and sees his friend Circle. She is above him in a tree. Rectangle asks Circle, "How did you get up there?" She says, "I bounced up here like a ball."



STUDENTS DO: Student 1 stands up, stretches legs, and reaches arms out like the branches of a tree. Student 2 holds up a circle with fingers and bounces into the tree. Student 2 says, "I bounced like a ball."

TEACHER SAY: Rectangle trotted over a bridge. Rectangle looks down and sees his friend Square below him in the river. He asks her, "How did you get down there, Square?" She says, "I was skipping across the bridge and wanted to swim, so I jumped below."



STUDENTS DO: Student 1 lies like a river. Student 2 makes a square with fingers and pretends to skip and then jump in the river and swim around. Student 2 says, "I was skipping across the bridge and wanted to swim, so I jumped below."

TEACHER DO: Make sure students are following directions. Switch roles and read story again.




Share (5 minutes)

Directions

1. TEACHER SAY: Think about the **Role Play** today. We used the words above and below a lot. Why do you think it is important that we know the words above and below. I will give you a minute to think about it.

TEACHER DO: Give 30-60 seconds **Think Time**.

 **STUDENTS DO:** Think silently about why it is important to know the meaning of above and below.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner** about your thinking.

 **STUDENTS DO:** **Shoulder Partners** share their thinking.

TEACHER DO: Give 30-60 seconds for students to discuss. Then use an **Attention-Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to talk about why they think it is important for us to understand the words above and below.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to colleagues.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Describe and demonstrate the position of an object using the terms above, behind, below, and in front of. 	<ul style="list-style-type: none"> Above Behind Below Circle In front of Rectangle Square Triangle 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils Ball Vocabulary cards for in front of and behind Handout of 2-dimensional shapes (one per student) Scissors Crayons “Sun to River” story board
LESSON PREPARATION		
<ul style="list-style-type: none"> Create or print out a handout of small triangles, squares, circles, and rectangles (about 3 cm) for students to color and cut out. You may be able to fit several of each shape on one paper, which will minimize the amount of copies you will need. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today, we will play "Catch and Count." You will stay seated until you catch the ball. I will point to a student and count 1. That student will catch the ball and stand. Then, that student points to a colleague, tosses the ball to that colleague, and counts 2. That student catches the ball and stands. We will continue to toss the ball, stand, and count until we reach 10. Then, we start counting again from 1 to 10 and play until everyone is standing. Make sure you have room.

TEACHER DO: Point to a student to stand. Toss the ball and count 1.



STUDENTS DO: Catch and count until 10. Repeat until everyone is standing.

TEACHER SAY: Superb job catching and counting. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display vocabulary cards: in front of and behind.

TEACHER SAY: Today we have new words to add to our math vocabulary word wall. Both of the words describe where something is. The first term is in front of. You are in front of me. I am in front of you. I am in front of the chalkboard (or another object behind you). Who can tell me something that is in front of you? Raise your hands.



STUDENTS DO: Raise hands to volunteer. Selected students identify something that is in front of them.

TEACHER DO: Confirm or correct students' answers.

TEACHER SAY: The other new word for today is behind. The chalkboard is behind me (or name another object that is behind you). The _____ (name of object or area) is behind you. To see something that is behind us, we have to turn around. Who can tell me something else that is behind you? Remember, you will have to turn around to see things that are behind you. Raise your hands.



STUDENTS DO: Raise hand to volunteer. Selected students identify something that is behind them.

TEACHER DO: Confirm or correct students' answers.

TEACHER SAY: The terms in front of and behind are opposites. I know what is in front of me, I can see it. But, I have to turn around to see things behind me. Point in front of you. Now point behind you.



STUDENTS DO: Point in front of them and then point behind them to demonstrate their understanding of the terms.

2. TEACHER SAY: Yesterday we **Role Played** the story "Sun to River." Today I have more to add to our story. Rectangle was trying to find his other shape friends. Raise a hand and share what happened first in the story.



STUDENTS DO: Raise hands to share.

TEACHER DO: Call on students with hand raised to share. Accept reasonable answers. If students struggle to remember, give them a prompt with a motion for Triangle blasting above the sun.

TEACHER SAY: Raise a hand and share what happened next in the story.



STUDENTS DO: Raise hands to share.

TEACHER DO: Call on students with hand raised to share. Accept reasonable answers. If students struggle to remember, give them a prompt with a motion for Circle bouncing into the tree above.

TEACHER SAY: Raise a hand and share what happened last in the story.



STUDENTS DO: Raise hands to share.

TEACHER DO: Call on students with hand raised to share. Accept reasonable answers. If students struggle to remember, give them a prompt with a motion for Square swimming in the river below.

TEACHER SAY: You remember the story very well. Give yourselves a pat on the brain.



STUDENTS DO: Pat head.

3. TEACHER DO: Display "Sun to River" story board.

TEACHER SAY: I am going to add a mountain to our picture. I will add the mountain behind the tree and the river.

TEACHER DO: Draw a mountain behind the tree and river.

TEACHER SAY: The motion for mountain is to stand and put your hands together in front of your chest.

TEACHER DO: Demonstrate mountain.

TEACHER SAY: I will also add a rock to the picture. I will add the rock in front of the tree.

TEACHER DO: Draw a rock in front of the tree.

TEACHER SAY: The motion for rock is to sit and curl up on the ground.

TEACHER DO: Demonstrate rock (or have a student demonstrate).

TEACHER SAY: In the story, Rectangle was looking for his friends. In the next part of the story, Rectangle continues to look for his friends. First, he looks in front of the mountain. Then he looks behind the mountain. Let's **Role Play**. Stand up with your **Shoulder Partner**.



STUDENTS DO: Stand with their **Shoulder Partners**.

TEACHER SAY: The person with the longer hair will be Student 1. Student 1 will stand and be the mountain. The person with the shortest hair will be Student 2. Student 2 will be Rectangle and look in front of the mountain. Make your hands look like a rectangle like this.



TEACHER DO: Demonstrate holding hands like a rectangle.



STUDENTS DO: Student 1 stands like a mountain. Student 2 makes rectangle hands and looks in front of the mountain.

TEACHER SAY: No shape friends there. Can you look behind the mountain?



STUDENTS DO: Student 1 stands like a mountain. Student 2 makes rectangle hands and looks behind the mountain.

TEACHER SAY: No shape friends there. Let's look in front of the rock. Student 1 will sit like a rock. Student 2 will be Rectangle and look in front of the rock. Remember to make your hands like a rectangle.



STUDENTS DO: Student 1 stands like a rock. Student 2 makes rectangle hands and looks in front of the rock.

TEACHER SAY: No shape friends there. Can you look behind the rock?



STUDENTS DO: Student 1 stands like a rock. Student 2 makes rectangle hands and looks behind the rock.

TEACHER DO: Have students switch roles and do the in front of and behind **Role Play** again.



STUDENTS DO: Switch roles so the student with the shorter hair is the mountain and rock and the student with the longer hair is Rectangle.



4. TEACHER DO: Hand out crayons and math journals and have students open them to the next blank page. Give students scissors and the handout with the 2-dimensional shapes.



STUDENTS DO: Open journals to the page for **Lesson 69**.

TEACHER SAY: Draw our story in your math journal. Draw the river, the tree, the sun, the mountain, and the rock. If you like, you can even draw the bridge.



STUDENTS DO: Draw a river, tree, sun, mountain, and rock in their math journals.

TEACHER SAY: Color and cut out the story shapes. **Role play** the story using the picture you drew in your journal. As you play, use the terms above, below, in front of, and behind.

TEACHER DO: Walk around the room as students are working and offer help as needed. Once students are finished they can **Role Play** the story with their shapes using the vocabulary words.



Share (5 minutes)

Directions

1. TEACHER SAY: Let's **Role Play** with our **Shoulder Partners**.



STUDENTS DO: Use their illustrations and 2-dimensional shapes to act out the story.

TEACHER SAY: Tell your **Shoulder Partner**, "Good job."



STUDENTS DO: Say, "Good job."

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Describe and demonstrate the position of objects using the terms above, below, in front of, behind, next to, and beside.

LESSON PREPARATION

- Make Vocabulary cards for next to and beside.
- Create cutouts to add to the “Sun to River” story board, such as a frog, bird, beetle, cloud, and flower. Students will add the cutouts to the story board.

KEY VOCABULARY

- Above
- Behind
- Below
- Beside
- Circle
- In front of
- Next to
- Rectangle
- Square
- Triangle

MATERIALS

- Calendar Math Area
- Math journals and pencils
- Ball
- Vocabulary cards for **next to** and **beside**
- Crayons
- Shape cutouts from **Lesson 69**
- “Sun to River” story board



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to practice counting while reaching up and down. We will stand, reach up and count, then reach down and count.

TEACHER DO: Model reaching up and down while counting to 10.

TEACHER SAY: Everyone stand and count with me. We will count to 10 three times.

 **STUDENTS DO:** Count aloud and reach up and down with the teacher three times.

TEACHER SAY: Good work. Give your **Shoulder Partner** a high five and a low five, then have a seat.

 **STUDENTS DO:** Give **Shoulder Partner** a high five and low five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display vocabulary cards: next to and beside.

TEACHER SAY: Today we will add two new words to our math vocabulary word wall. The new terms are next to and beside. Both of these words describe where something is. They mean the same thing. You are next to your **Shoulder Partner**. You are beside your **Shoulder Partner**. Raise a hand and tell me something else that you are next to or beside.

 **STUDENTS DO:** Raise hands to volunteer. Selected students describe something that is next to or beside them.

TEACHER DO: Praise accurate responses. Correct inaccurate responses.

TEACHER SAY: Yesterday, we illustrated the story “Sun to River” and made cutouts of the shape friends in the story. I loved all your pictures. Today, we are going to add some objects to our pictures. Watch as I add to my picture.

TEACHER DO: Draw a cloud next to the sun.

TEACHER SAY: I drew a cloud next to the sun. What other word could I use to explain that the cloud is next to the sun? Give me a **Thumbs Up** if you know.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected student explains that the cloud is beside the sun.

TEACHER DO: Have various cutouts to add to the picture (for example, a frog, bird, beetle, cloud, and flower). Ask volunteers to come up and place objects next to or beside specific landmarks in the story board.



STUDENTS DO: Selected students place cutout objects on the “Sun to River” storyboard.

TEACHER SAY: I want you to brainstorm things that you could add to your picture. Think about what you could add to your picture.



STUDENTS DO: Think about objects they can add to their drawings.

2. TEACHER SAY: Now it is your turn to add things next to or beside the landmarks in your picture – that is, next to the sun, next to the tree, beside the mountain, beside the river, next to the rock. Be creative and make your picture unique. Make sure that you can use the words next to or beside to explain where things are located in your picture.



TEACHER DO: Hand out math journals and crayons. Have students open their journals to the page for **Lesson 69**.



STUDENTS DO: Open their math journals to the page for **Lesson 69**. Draw objects next to the landmarks in the pictures in their journals.

TEACHER DO: Walk around the room and help students as needed. Offer ideas to students if they get stuck. Encourage the use of the terms next to and beside.

TEACHER SAY: Now it is time to add one final detail to our pictures. Can you guess what that may be?



STUDENTS DO: Make guesses.

3. TEACHER SAY: The last details we will add to our storyboard are our shape friends. This time you get to decide who goes where. Maybe you want Rectangle to swim below in the river. Perhaps Circle bounced all the way above the clouds.

TEACHER DO: Hand out glue and 2-dimensional shapes from **Lesson 69** (or have students take them out if they have them).



STUDENTS DO: Glue 2-dimensional shapes in place in the pictures they drew in their journals.

TEACHER DO: Allow students to work until the end of the Learn segment. Then, invite them to Share and have them bring their math journals.



Share (5 minutes)

Directions

1. TEACHER SAY: I would love to see the drawings you created. I am going to use **Calling Sticks** to call on some of you. If I call on you, I want you to show us your picture and tell us where something is using one of our vocabulary words: above, below, in front of, behind, next to, or beside.

TEACHER DO: Use **Calling Sticks** to select students to share their drawings and use the new vocabulary words.



STUDENTS DO: Selected students show their colleagues their drawings and describe the position of an object on the page in relation to another object using one of the new vocabulary words. Seated students observe and listen quietly.

TEACHER DO: Assist students as needed with their use of the vocabulary words. Praise students who correctly use vocabulary words. Help students who need assistance using vocabulary words.




KINDERGARTEN I

Mathematics

Chapter 2

Lessons 71–80

Lessons 71–80

COMPONENT	DESCRIPTION	TIME
 Calendar and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15–20 minutes
 Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25–30 minutes
 Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from colleagues' perspectives.	5–10 minutes

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

COUNTING AND CARDINALITY

- Use ordinal numbers (first, second, third, and so on) to describe objects up to 5 (fifth).

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - using objects or drawings to represent a problem
 - decomposing numbers into pairs in more than one way (for example, $5=2+3$ and $5=4+1$)
 - finding the number of objects that make 10 when added to any number 1–9

NUMBERS AND OPERATIONS IN BASE TEN:

- Compose and decompose 10 using objects, drawings, and so on.

GEOMETRY:

- Describe objects in the environment using names of shapes.
- Correctly use terms such as above, below, beside, in front of, behind, and next to.
- Correctly name 2-dimensional shapes (triangle, circle, rectangle, square).
- Compose larger shapes by combining simple shapes.

LESSON	INSTRUCTIONAL FOCUS
71	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Find the number of objects that make 10 when added to any number 1 through 9.• Compose 10 from two addends using manipulatives.
72	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Find the number of objects that make 10 when added to any number 1 through 9.• Compose 10 from two addends using manipulatives.
73	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Demonstrate understanding of ordinal numbers first through fifth.• Use ordinal numbers first through fifth.
74	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Demonstrate understanding of ordinal numbers first through fifth.• Use ordinal numbers first through fifth to describe objects.• Name 2-dimensional shapes circle, triangle, square, and rectangle.
75	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Combine simple shapes to compose pictures.• Name 2-dimensional shapes.• Use terms above, below, beside, in front of, behind, and next to.
76	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Combine simple shapes to compose original pictures.• Name 2-dimensional shapes.
77	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Combine simple shapes to compose original pictures.• Name 2-dimensional shapes.
78	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to solve subtraction problems.• Subtract within 5 using objects, drawings, and manipulatives.

79

Students will:

- Participate in Calendar Math activities.
- Apply strategies to solve subtraction problems.
- Subtract within 5 using objects, drawings, and manipulatives.

80

Students will:

- Participate in Calendar Math activities.
- Add and subtract within ten using a number line.

Chapter Preparation

- In **Lessons 71 and 72**:
 - Create a large set of number cards for the teacher (See Blackline Masters).
 - Prepare number pair cards (See Blackline Masters). Each number pair card should show two numbers. Students will work in pairs to add the two numbers together to see if they make ten. Each pair of students should receive five number pair cards. Examples are shown below.
 - * Option: Add dots to the cards before copying/creating.
- For **Lesson 72**:
 - Prepare one box labeled trash and one box labeled treasure (one per small group of students). Students will classify number pairs according to whether or not the two numbers on the cards make ten.
 - * Option: Give each small group one sheet of construction paper labeled Trash and one labeled Treasure. Students can stack their number cards instead of placing them in the boxes.
- For **Lesson 73**:
 - Gather different colored pom-poms (small yarn balls) or color ping pong balls with permanent markers.
 - Make a large chart labeled 1st, 2nd, 3rd, 4th, and 5th to record race results.
 - Prepare a large set of cards for ordinal numbers 1st through 5th (also used in **Lesson 74**).

1st first	2nd second	3rd third	4th fourth	5th fifth
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- Prepare five large differently-colored circles to use to illustrate order.
- For **Lessons 75 through 77**:
 - Students will use square, rectangle, triangle, and circle shape blocks. If you do not have shape blocks, print out Shape Blocks Blackline Master (two pages) and have students color the shapes. Consider asking parent volunteers or helpers to color and cut out the shapes to prepare for the activity. Alternatively, students may take home the Shape Blocks pages to color and cut out at home, then bring them back to school.
 - Print out or recreate Shape Mats Blackline Master (one copy for the teacher).
 - Print out or recreate Student Shape Mats. See **Lesson 76** for a detailed description of the activity.
- For **Lesson 78**:
 - Find or create a large picture showing five animals.
 - Make circles that will cover and hide the animals in the picture.
 - Draw, color, and cut out five falafel (or photos of falafel) that will fit on a paper plate.
 - Make vocabulary word cards: subtract, take away, difference, minus.

Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

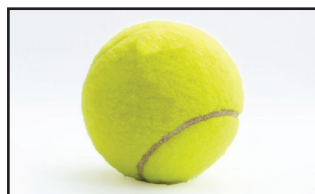
- **Attention Getting Signal**
- **Brainstorm**
- **Calling Sticks**
- **Gallery Walk**
- **Lean and Whisper**
- **One Stay, One Stray**
- **Pair/Share**
- **Shoulder Partner**
- **Think Time**
- **Thumbs Up**
- **Turn and Talk**
- **Wait Time**
- **Whisper/Whisper Hands**

Materials Used

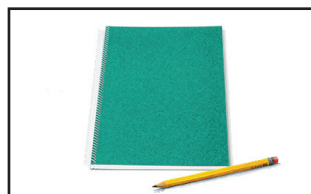
Calendar math area



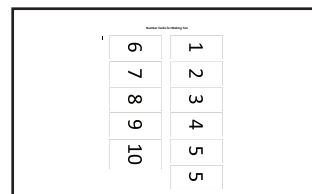
Ball



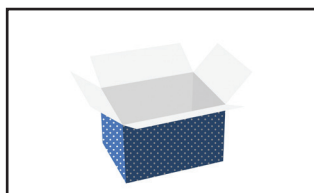
Math journal and pencils



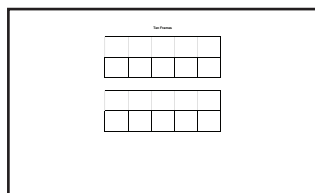
Set of large teacher number cards



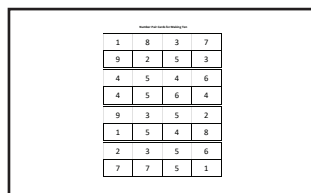
Two boxes (alternate: pieces of construction paper)



Ten frame



Student sets of number pair cards



Student sets of counters



Cups



Dots



Pompoms, assorted colors



Vocabulary cards

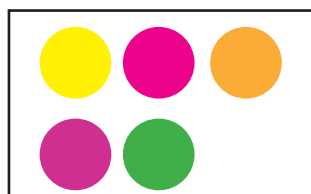


Straws

Tape or glue



Five large circles of different colors

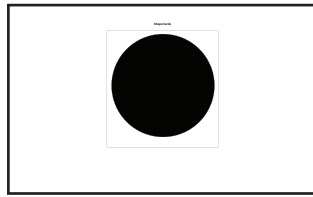


Race track materials (see chapter preparation)

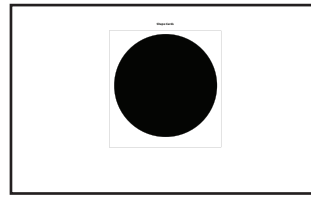
Poster or chart paper



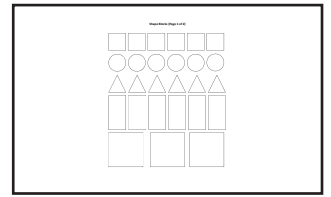
Teacher large shape cards



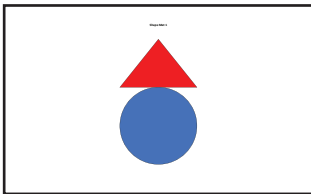
Students shape cards



Shape blocks



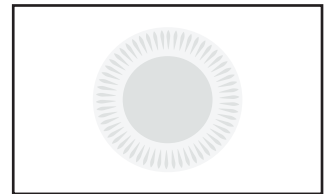
Shape mats



Teacher set of large dot cards



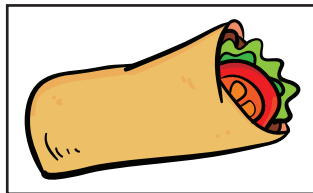
Paper plates



Picture showing 5 animals and paper to cover each animal



Falafel cutouts



OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Find the number of objects that make 10 when added to any number 1 through 9. Compose 10 from two addends using manipulatives. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Ball Set of large number cards (one set for the teacher) Two boxes/sheets of construction paper labeled Trash and Treasure Ten frame Number Pair Cards (eight cards per small group of students) Sets of counters (one set per small group of students) Math journals and pencils
LESSON PREPARATION		
<ul style="list-style-type: none"> Print or create a large set of number cards. (See Chapter Preparation.) Print or create sets of Number Pair Cards. Each small group of students will need eight cards. (See Chapter Preparation.) Create two boxes per table group labeled “trash” and the other “treasure.” A mini trash can and treasure box are ideal to use for teacher display, but picture labels will suffice. Have a ball ready to play “Catch and Count” for Movement Math. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

*Note for the Teacher: Students will be playing Catch and Count. They have played this game several times. However, if they need to review directions, please refer to **Lesson 65**.*

TEACHER SAY: Let's do Movement Math. Today we will play Catch and Count.



STUDENTS DO: Participate in Catch and Count.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Have number cards ready to display.

TEACHER SAY: Today we are going to work on ways to make ten. Remember, ten is a wonderful number because we have ten fingers. Show me your ten fingers.



STUDENTS DO: Show ten fingers.

TEACHER SAY: Let's do a warmup activity together. We will not use counters. Instead we will count our classmates. If I pull your **Calling Stick**, line up at the front of the classroom. If you are a classmate being counted, you still have to count, too.

TEACHER DO: Use **Calling Sticks** to call five students to the front.

TEACHER SAY: Count your classmates and **Whisper** that number into your hand.



STUDENTS DO: Count students and **Whisper** five into hands.

TEACHER SAY: How many classmates are in front?



STUDENTS DO: Respond together: Five.

TEACHER DO: Display 5 number card.

TEACHER SAY: We want to have ten classmates up front. Raise your hand if you know how many more classmates we need to add to make ten.



STUDENTS DO: Raise hand to volunteer. Selected student answers the question: Five.

TEACHER DO: Use **Calling Sticks** to call five more students to the front of the room. Have all students count aloud together.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: We added five more classmates to make ten. Five and five make ten.

TEACHER DO: Display number card 5 side by side with second number card 5. Continue showing ways to make ten until all combinations have been made.

TEACHER SAY: We have found many ways to make ten. You are now going to work with a group of classmates to practice making ten.

TEACHER DO: Display Trash and Treasure box and a number card with two numbers that make ten.

TEACHER SAY: Each group will receive eight Number Pair Cards and two small boxes. Each card has two numbers on it. Some of them make a ten and some do not. If the two numbers on a card make ten, that card is treasure, so I place it in the Treasure box.

TEACHER DO: Point to box labeled Treasure.

TEACHER SAY: If the two numbers on a card do not make ten, that card is trash, so I place it in the Trash box.

TEACHER DO: Point to box labeled Trash.



2. TEACHER DO: Hand out math journals.

TEACHER SAY: Open your math journal to Lesson 71. There is a ten frame there. I am going to give you and your group counters. You can use the counters and the ten frame if you need them to help you determine whether your card is trash or treasure.

TEACHER DO: Hand out counters and at least five Number Pair Cards to each small group of students.




STUDENTS DO: Work with their classmates to determine whether two numbers make ten. Classify number pairs as trash or treasure.

Note to the Teacher: If you have students who are ready, they can be assigned as checkers to examine the Trash or Treasure boxes and confirm that students have sorted their cards correctly.

TEACHER DO: Use **Attention Getting Signal** to quiet students.

TEACHER SAY: Give me a **Thumbs Up** if you and your group can tell us about some treasure you found.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Selected students share number combinations they found that make ten.

TEACHER DO: Collect all Number Pair Cards and boxes. Praise students for good collaboration and calculation.



Share (5 minutes)

Directions

1. TEACHER SAY: Tell me what strategies you used to figure out whether a number pair made ten. Give me a **Thumbs Up** to volunteer.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Share if called on to share or listen actively to classmates.

TEACHER DO: Note the strategies that students share. Correct misconceptions and confirm effective and efficient strategies for finding ten.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Find the number of objects that make 10 when added to any number 1 through 9. Compose 10 from two addends using manipulatives. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journals and pencils Cups (one for every pair of students) Set of 10 counters (one set for each pair of students) Ten frame Dots Tape
LESSON PREPARATION		
<ul style="list-style-type: none"> Gather plastic or paper cups (one for each pair of students). Gather a set of 10 counters (one for each pair of students). 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to stand up and stomp and count to 10. I will show you by stomping and counting first. Stand up and join me when you understand the pattern.

TEACHER DO: Model stomping and counting movement, stomping once for each number.



STUDENTS DO: Stomp and count to 10 three times with the teacher.

TEACHER SAY: Super stomping and counting. Give your **Shoulder Partner** a handshake and have a seat.



STUDENTS DO: Give your **Shoulder Partner** a handshake and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display ten frame with ten dots taped on. Show students a cup.

TEACHER SAY: I am going to put these dots in my cup. Count with me as I take them off the frame.



STUDENTS DO: Count to ten with teacher.

TEACHER DO: Take dots off one-by-one and place in cup while counting.

TEACHER SAY: This is called a ten frame because it has ten spaces. I have ten dots in my cup. I am going to put six dots on the ten frame. Count with me as I put them on the frame.



STUDENTS DO: Count to six with teacher.

TEACHER DO: Count aloud as you place six dots on the ten frame.

TEACHER SAY: Now my ten frame has six dots and I still have the rest in my cup. I wonder how many dots are in my cup. I could look in the cup and count them, but I wonder if there is a way to figure out how many counters are in my cup without looking?

TEACHER DO: Make thinking face. Give **Think Time**.

TEACHER SAY: Turn and Talk to your **Shoulder Partner**. I want you to **Brainstorm**: how can we use the ten frame to figure out how many counters are in the cup?



STUDENTS DO: Talk to their **Shoulder Partners** about their ideas.

TEACHER SAY: Give me a **Thumbs Up** if you have an idea you would like to share.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected students share their ideas.

TEACHER DO: Note students who identify ten frame strategies that will work, such as putting the dots on the ten frame and counting the empty spaces. If no students identify that strategy, guide students in how to use the strategy as you play the Cup Game together.

2. TEACHER SAY: Today we are going to play the Cup Game. Show me on your fingers how many dots we started with.



STUDENTS DO: Show 10 on fingers.

TEACHER SAY: Good. We started with ten dots and I put all of them in the cup. Then, I put six dots back on the ten frame. I need a partner to help me play the game.



STUDENTS DO: Raise hands to volunteer. Selected student goes to the front of the room.

TEACHER DO: Call on a volunteer. If possible, call on a student who explained how to use the ten frame to figure out how many dots are in the cup.

TEACHER SAY: _____ (Student's name) will play the game with me. _____ (Student's name) will use the ten frame to figure out how many dots I have in the cup. I will make sure I do not show how many are in my cup.



STUDENTS DO: Selected student counts the blank spaces on the ten frame to identify how many dots are in the cup and shares the answer.

TEACHER DO: Help volunteer as needed. Do a **Think Aloud** to help seated students understand the strategy.

TEACHER SAY: Let's check to see if _____ (student's name) is right.

TEACHER DO: Have volunteer take dots out of the cup and tape them to the ten frame, counting aloud as they go.



STUDENTS DO: Volunteer checks work by taping dots to the ten frame while counting aloud.

TEACHER SAY: Very good. This shows us that six dots and four dots make ten dots.

TEACHER DO: Take dots off the ten frame and put them in the cup.

3. TEACHER SAY: Now you and a partner will play the game.

The person with the longest hair will be the cup holder first. The cup holder will put some counters

on the ten frame where your partner can see them. The other counters remain hidden in the cup. Do not let your partner see what is inside the cup.

TEACHER DO: Take seven counters out of the cup. Tape them onto the ten frame.

TEACHER SAY: Your partner has to figure out how many counters remain in the cup. We can do that by counting empty squares on the ten frame to see how many counters are missing. Count with me.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: There are seven counters that we can see. Our partner cannot see what is in the cup. How can they figure out what is in the cup without looking?

TEACHER DO: Make thinking face. Give **Think Time**.

TEACHER SAY: Raise your hand if you remember.



STUDENTS DO: Raise hand to volunteer. Selected student shares answer.

TEACHER SAY: We have to count how many empty spaces are on the ten frame. Count with me.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: There are three empty spaces in the ten frame. Now think in your brain, will seven and three make ten?

TEACHER DO: Make thinking face. Give **Think Time**.

TEACHER SAY: Give a **Thumbs Up** if you agree.



STUDENTS DO: Give a **Thumbs Up** if they agree.

Note to the Teacher: If students are unsure, continue with a few more examples before sending students to play. If the majority of students grasp the concept, continue. Make different pairings of students if needed.

TEACHER SAY: Now I will look in the cup and count. Count with me.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: Give your brain a high five if you knew there were three counters in the cup.



STUDENTS DO: Pat their heads.

TEACHER SAY: The student with the longest hair is the cup holder. The person with the shorter hair will figure out how many counters are in the cup. Then you will switch jobs. Open your math journals to Lesson 72. There is a blank ten frame on that page. Use the ten frame to play the game.



TEACHER DO: Hand out math journals, cups, and counters to each pair of students. Remind students to use the ten frame in their journals.



STUDENTS DO: Play Cup Game.

TEACHER DO: Circulate around the room helping when needed.

Note to the Teacher: For struggling students, remind them to count the blank spaces of the ten frame. For advanced students, have them calculate without the help of a ten frame.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about the games we played today and yesterday. Think about how you used the ten frame. Give me a **Thumbs Up** if you remember.



STUDENTS DO: Think about how they used the ten frame. Give a **Thumbs Up** to volunteer. Selected students discuss how they used the ten frame.

TEACHER SAY: In your math journal draw ten dots on the ten frame.



STUDENTS DO: Draw dots on ten frame.

TEACHER SAY: Think of other ways you can show ten.

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**. Then draw other ways to show ten in your student math journal.



STUDENTS DO: Shoulder Partners share. Draw ten in a different ways. May include tally marks, addition problem, number card, dice, fingers, or pictures.

TEACHER DO: Give ample time for students **Turn and Talk** and make ten in their journals. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partner**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Demonstrate understanding of ordinal numbers first through fifth. Use ordinal numbers first through fifth. 	<ul style="list-style-type: none"> Fifth First Fourth Second Third 	<ul style="list-style-type: none"> Calendar Math Area Vocabulary cards: first, second, third, fourth, fifth Pom-poms of different colors (one per student) Straws (one per student) Tape Five circles of different colors Race track materials Large chart labeled 1st, 2nd, 3rd, 4th, 5th
LESSON PREPARATION		
<ul style="list-style-type: none"> Make Vocabulary cards: first, second, third, fourth, fifth. Prepare for race (See Chapter Preparation for instructions.): <ul style="list-style-type: none"> Gather pom-poms of at least five different colors. (Any light weight object that you can color or mark on will work, such as ping pong balls, marbles, Styrofoam balls, or popcorn.) Gather straws (one set for each student). Make a race track with five lanes on a flat surface using tape or chalk. Make the lanes big enough so each student has room. Make sure to have a start and finish line. Make a large chart labeled 1st, 2nd, 3rd, 4th, 5th. Prepare five large circles of different colors. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to practice counting while reaching up and down. We will reach up and count, then reach down and count. Everyone stand up. Put your hands on your shoulders and be ready to count with me. We will count to 10 three times.

TEACHER DO: Model reaching up and down while counting to 10 with students. Repeat three times.



STUDENTS DO: Count aloud and reach up and down with the teacher.

TEACHER SAY: Good work. Give your **Shoulder Partner** a high five and a low-five, then have a seat.



STUDENTS DO: Give **Shoulder Partner** high five and low five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display vocabulary cards in order: first, second, third, fourth, fifth. (Consider taping them to the chalkboard or wall.) Have five colored circles ready.

TEACHER SAY: Today we will learn ordinal words. When objects are put in order they have a certain name. Just like when we are counting we say one, two, three, four, five. We have similar words to tell what order objects are in.

TEACHER DO: Hold up a circle.

TEACHER SAY: I will place this _____ (color) circle under the word first. Say first with me.



STUDENTS DO: Say together: First.

TEACHER DO: Continue placing colored circles under ordinal words and having students repeat the terms.



STUDENTS DO: Repeat ordinal numbers when asked.

TEACHER SAY: Now I will pull five **Calling Sticks**. If I call you, stand under the word that tells the order in which you were called. I will help you. Students, if you know where your classmate should stand, you can help by pointing to the right word.

TEACHER DO: Pull the first **Calling Stick**.

TEACHER SAY: _____ (Student's name) is first. _____ (Student's name) should stand under the vocabulary card that says first.



STUDENTS DO: Selected student stands under the vocabulary card for first.

TEACHER DO: If needed, help the first student stand under the correct ordinal number. Continue the process for four more students, stating the ordinal number for each, and helping them stand under the correct ordinal number.



STUDENTS DO: Selected students stand under the correct ordinal number vocabulary card.

TEACHER SAY: Now let's point and say the order. Point with me.

TEACHER DO: Point to each student saying, "First, second, third, fourth, fifth."



STUDENT DO: Point to each student. Together say, "First, second, third, fourth, fifth."

TEACHER SAY: Everyone who is sitting, I want you to try to remember the order in which your classmates are standing. You are going to cover your eyes. Do not peek. Your classmates will move to a new spot. When you open your eyes, see if you can put them back in the right order in your brain. Then we will talk about it. Close your eyes.

Note to the Teacher: This memory game can also be played by changing the placement of the colored dots instead of the students. Leave the ordinal number cards and dots on the wall for use in the next lesson.

TEACHER DO: Make sure that seated students are not looking and put the standing students into a new order.



STUDENTS DO: Close eyes. Standing students change order.

TEACHER SAY: Open your eyes and think in your brain. Who should be first?

TEACHER DO: Give **Think Time**.

TEACHER SAY: Raise a hand to say who should be in first.

 **STUDENTS DO:** Raise hand to answer. Selected student identifies who should be first.

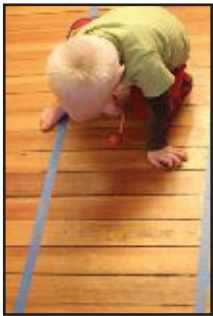
TEACHER DO: Call on students until someone identifies the correct student. Continue process until all students are put back in original order.

2. TEACHER SAY: Let's practice ordinal numbers in another way. We will have a race. We will use a straw to blow a pom-pom like this.

TEACHER DO: Demonstrate blowing pom-pom forward.


TEACHER SAY: Five students will race their pom-poms (make sure students have different-colored pom-poms). We will pay attention to the order in which they cross the finish line.

TEACHER DO: Select five students and transition them to the race track you have prepared. Then gather all students around.




Note to the Teacher: Consider having a talk with students about good sportsmanship before beginning the races. To make sure students pay attention to all directions, do not hand out materials until each race begins.

TEACHER DO: Hand out a straw and pom-pom to the first group of five students. Allow students to practice blowing and moving the pom-pom.

 **STUDENTS DO:** Five students who are racing line up at the starting line with their straws and pom-poms.


TEACHER SAY: Ready, set, blow.

 **STUDENTS DO:** Blow into straw to move pom-pom to finish line. Non-racing students watch to observe the order in which the pom-poms cross the finish line.

TEACHER DO: Stand at finish line. Make note of the colors that are first, second, third, fourth, and fifth.


TEACHER SAY: Which color came in first?

TEACHER DO: Hold up one finger.


 **STUDENTS DO:** Call out the color that came in first.

TEACHER SAY: Which color came in second?


TEACHER DO: Hold up two fingers.

 **STUDENTS DO:** Call out the color that came in second.

TEACHER DO: Continue through the fifth color. Confirm correct responses. Call another group of five students to race. Repeat process. If time allows, make sure all students have a chance to race.

 **STUDENTS DO:** Race pom-poms and identify the order in which pom-poms cross the finish line.

TEACHER SAY: Good job today using the ordinal numbers first, second, third, fourth, and fifth. You may keep your straw. I will collect the pom-poms.

 **STUDENTS DO:** Keep straw and return pom-poms to the teacher.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about the fun we had in math today. How do the words first, second, third, fourth, and fifth help us? Can you remember other times you have heard or used those words?

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give ample time for students to discuss. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partner**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Demonstrate understanding of ordinal numbers first through fifth. • Use ordinal numbers first through fifth to describe objects. • Name 2-dimensional shapes circle, triangle, square, and rectangle. 	<ul style="list-style-type: none"> • Circle • Ordinal Numbers: First, Second, Third, Fourth, Fifth • Rectangle • Square • Triangle 	<ul style="list-style-type: none"> • Calendar Math Area • Large shape cards (one set for the teacher) • Student shape cards (one set per student)
LESSON PREPARATION		
<ul style="list-style-type: none"> • Add the ordinal vocabulary words to the math word wall for reference. • Print out or create a set of large shape cards of rectangles, circles, triangles, and squares. See Shape Cards Blackline Master. • Print out or create sets of student shape cards (one set per student). See Student Shape Cards Blackline Master. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math. Use ordinal number cards from **Lesson 73**.

TEACHER SAY: Let's do Movement Math. Today we will play the game we played in our previous lesson. I will pull **Calling Sticks**. You will stand in the order in which you were called.

TEACHER DO: Pull **Calling Sticks** one at a time, allowing time for students to find their order.



STUDENTS DO: Selected students stand under the appropriate ordinal number.

TEACHER SAY: Now let's point and say the order. Point with me.

TEACHER DO: Point to each student and say, "First, second, third, fourth, fifth."



STUDENT DO: Point to each student with the teacher and say, "First, second, third, fourth, fifth."

TEACHER SAY: _____ (Student's name) is the first student. _____ (Student's name), give us a movement you would like us to do first.




STUDENTS DO: First student does a movement.

TEACHER SAY: _____ (Student's name) is the second student. _____ (Student's name), give us a movement you would like us to do second.



STUDENTS DO: Second student does a movement.

TEACHER DO: Continue until all five students have provided a movement. Guide all students in doing the five movements in order while saying, “First, second, third, fourth, and fifth.”

 **STUDENTS DO:** Do five movements in order while saying, “First, second, third, fourth, and fifth.”

TEACHER SAY: Great job. Let’s celebrate. Clap two times and say, “Wooo.”

 **STUDENTS DO:** Clap two times and say, “Wooo.”



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Now we will play a similar game with shapes. I will show you cards with shapes. You tell me what they are.

TEACHER DO: Display four shape cards in the following order: triangle, square, circle, and rectangle.

TEACHER SAY: Point to the first shape. What is the first shape?

 **STUDENTS DO:** Point and say together: Triangle.

Note to the Teacher: If time allows, ask follow-up questions that require higher order thinking such as: “How do you know it is a triangle?” or “What is different about a square and a circle?” Confirm accurate responses and correct inaccurate responses.

TEACHER SAY: Point to the second shape. What is the second shape?

 **STUDENTS DO:** Point and say together: Square.

TEACHER SAY: Point to the third shape. What is the third shape?


 **STUDENTS DO:** Point and say together: Circle.

TEACHER SAY: Point to the fourth shape. What is the fourth shape?

 **STUDENTS DO:** Point and say together: Rectangle.

TEACHER SAY: Try to remember the order of these shapes. I am going to turn my shape cards around so that you cannot see them. Then I will give you a set of shape cards. I want you to put your shapes in this order.

TEACHER DO: Turn cards around. Hand out a set of shapes to each student. Allow students to work for a few minutes to recreate the order of your shapes.

 **STUDENTS DO:** Recreate the order of shapes from memory.

TEACHER SAY: Let’s see if we remember the correct order. **Whisper** in your hand the shape that was first.

 **STUDENTS DO:** **Whisper** in hand: Triangle.

TEACHER DO: Turn over first shape card.

TEACHER SAY: The first shape is the triangle. Give your brain a high five if you were correct. If you need to fix it, do so now.

 **STUDENTS DO:** Pat heads.

TEACHER SAY: **Lean and Whisper** to your **Shoulder Partner** what shape is second.

 **STUDENTS DO: Lean and Whisper:** Square.

TEACHER DO: Turn over second shape card revealing the square.

TEACHER SAY: The second shape is the square. Give your **Shoulder Partner** a high five.

 **STUDENTS DO:** Give **Shoulder Partner** a high five.

TEACHER SAY: What ordinal number should we use to describe the next shape? **Whisper** that term into your hand.

 **STUDENTS DO: Whisper** into hand: Third.

TEACHER SAY: The next shape is our third shape. Let's see what shape is third.

TEACHER DO: Turn over third shape card revealing circle.

TEACHER SAY: The circle was the third shape. Smile if you knew that.

 **STUDENTS DO:** Look at teacher and smile.

TEACHER SAY: **Lean and Whisper** to your **Shoulder Partner** what shape is last.

 **STUDENTS DO: Lean and Whisper:** Rectangle.

TEACHER DO: Turn over last shape card revealing rectangle.

TEACHER SAY: The rectangle is last. Raise a quiet hand if you know what ordinal number we should use for the rectangle.


 **STUDENTS DO:** Raise hands to volunteer. Selected student identifies ordinal number.

TEACHER SAY: The rectangle is the fourth shape. Now let's point and say the order. Point and say the ordinal numbers with me. First, second, third, and fourth.

 **STUDENT DO:** Point to each shape with teacher and say: First, second, third, fourth.

TEACHER DO: If students need more practice, mix up the order of the shape cards and play again.

2. TEACHER SAY: You did a wonderful job playing this game with me. Now you will **Hands Up, Pair Up** and play the same game with a friend. You will each take a turn, so decide who will go first. The first partner will choose an order for the shapes, show your partner, then turn the shapes over. The second partner will memorize the order of the shapes and put their shapes in the same order. Then you will both check to see if the order of the shapes match.

 **STUDENTS DO: Hands Up, Pair Up** to find a partner. Take turns choosing the order and remembering the order. Use ordinal numbers.

TEACHER DO: Circulate and help students as needed. Encourage students to use ordinal terms and refer to the math word wall. Give students 10-15 minutes to play. Use an **Attention Getting Signal**.

Note to the Teacher: To make this activity more challenging, give students more shape cards or have students practice telling the order of the shapes and not showing the order. For struggling students, reduce the number of shapes.



Share (5 minutes)

Directions

1. **TEACHER SAY:** Think about the games we played in math today. How do you know something is first? What comes after first? How can you tell if something is third or fourth or fifth?

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give ample time for students to discuss. Then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand if you would like to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hand to share.

TEACHER DO: Call on students with hand raised to share. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Combine simple shapes to compose pictures. Name 2-dimensional shapes. Use terms above, below, beside, in front of, behind, and next to. 	<ul style="list-style-type: none"> Above Behind Below Beside Circle In front of Next to Rectangle Square Triangle 	<ul style="list-style-type: none"> Calendar Math Area Large shape cut outs (See Lesson Preparation for instructions.) Shape blocks (or use Shape Blocks Blackline Master to create shape blocks) (one set per student) 4 Shape Mats (See Shape Mats Blackline Master) Large teacher set of dot cards
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare large shapes (one set for the teacher): Large square, large triangle, large rectangle, two small circles. Have student sets of shape blocks: square, rectangle, triangle, and circle. (See Chapter Preparation for instructions and Shape Blocks Blackline Masters for examples, if needed.) Print out or recreate four Shape Mats ready. (See Chapter Preparation for instructions and Shape Mats Blackline Masters.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Get large teacher set of dot cards and prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today I am going to show you dot cards one at a time. I want you to clap the number of dots you see. For example, if I hold up the dot card with 5 dots on it, you will clap 5 times. Let's try it.



STUDENTS DO: Join the teacher in the movement and counting pattern.

TEACHER DO: Repeat using a different dot card and different movement, pausing for students to do movement.

TEACHER SAY: Turn to your **Shoulder Partner** and give them a handshake and have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake then sit.



Learn (25-30 minutes)

Directions

Note to the Teacher: This lesson is heavily student-centered. It involves very little direct instruction and focuses instead on questioning and discussion. Place emphasis on students' ideas. Ask follow up questions that require higher order thinking such as: "How many shapes are below the square? How many are above?" or "What is different about a square and a circle?" Confirm accurate responses and correct inaccurate ones.

1. TEACHER DO: Display large shape cut outs.

TEACHER SAY: Today we will combine shapes to make larger shapes.

TEACHER DO: Hold up square.

TEACHER SAY: What is this shape?

 **STUDENTS DO:** Respond together: Square.

TEACHER DO: Hold up triangle.

TEACHER SAY: What shape is this?

 **STUDENTS DO:** Respond together: Triangle.

TEACHER SAY: You know your shapes very well. Now I will place the triangle above the square.


TEACHER DO: Place the triangle above the square. Hold them as shown below. Give **Wait Time**.

TEACHER SAY: Turn and Talk to your **Shoulder Partner**: What do you think this new shape looks like?

 **STUDENTS DO:** Turn and Talk to your **Shoulder Partner** about shape.

TEACHER DO: Give 30-60 seconds talk time.

TEACHER SAY: Raise a hand if you would like to share your ideas.

 **STUDENTS DO:** Raise hand to share. Share if called on or actively listen.

Note to the Teacher: Students' responses might include imaginative answers, such as house, arrow, rocket, or literal ones, such as a square with a triangle on top.

TEACHER DO: Accept reasonable answers. Put down the triangle and square. Display a rectangle.

TEACHER SAY: Whisper in your hand what shape this is?

 **STUDENTS DO:** Whisper in hand: Rectangle.

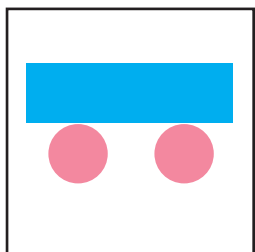
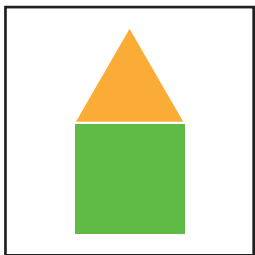
TEACHER DO: Add two circles below the rectangle (attach with paper clip or tape to chalkboard).

TEACHER SAY: We have learned a lot of new words recently including in front of, behind, above, below, beside, and next to.

TEACHER DO: Model position words with hand, moving it to demonstrate what each word means.

TEACHER SAY: Tell me where the circles are compared to the rectangle.

 **STUDENTS DO:** Respond: Below the rectangle.



TEACHER SAY: Turn and Talk to your **Shoulder Partner:** What do you think this new shape looks like?

 **STUDENTS DO:** Turn and Talk to **Shoulder Partner** about shape.

TEACHER DO: Give 30-60 seconds talk time.

TEACHER SAY: Raise a hand if you would like to share your ideas.

 **STUDENTS DO:** Raise hands to volunteer. Share if called on or listen actively to classmates.

TEACHER DO: Accept reasonable answers. Students may say, car, cart, wagon, or other answers.

2. TEACHER SAY: Now I will show you a picture of two shapes that are already combined. I want you to think about what shapes I combined.

TEACHER DO: Display Shape Mat 1 with circle and triangle combined.


TEACHER SAY: Whisper in your hand the shapes you see.

 **STUDENTS DO:** Whisper into hand: Circle and triangle.

TEACHER SAY: What two shapes do you see?

 **STUDENTS DO:** Raise hands to volunteer. Share if called on or listen actively to classmates.

TEACHER DO: Display Shape Mats 2, 3, 4, and 5 one at a time. Ask students to identify the shapes that make up the pictures and to share what they think each picture looks like. Ask questions to encourage use of positional terms: in front of, behind, above, below, beside, and next to.

 **STUDENTS DO:** Name shapes in combined images. Use positional words. Share thinking about the new image.

Note to the Teacher: When children get something new they are naturally curious. Allow students time to explore or play, so they will focus better when it is time to listen to and follow directions. If students are not allowed playtime, they may play during the lesson and time will be wasted redirecting them and trying to get them to focus.

3. TEACHER SAY: Now I will give you shape blocks to build a picture I hold up. First, I will give you two minutes to explore the math tools before we begin.

TEACHER DO: Hand out shape blocks (or student sets of paper shape blocks). Allow students about two minutes to explore the math tools before continuing the activity.

 **STUDENTS DO:** Explore shape blocks.

TEACHER SAY: You have had a chance to explore your shape blocks. Now we will use them as math tools. I will display a picture just as I did before. Then, you will build the same picture (or close to it) using shape blocks. You may not have the same sizes I have, but use what you do have. Also, do not worry about the colors of the shapes. It does not matter if they match.

TEACHER DO: Display Shape Mat 1 again.

 **STUDENTS DO:** Build shape using circle and triangle.

TEACHER SAY: Tell me what two shapes did you use to build this bigger shape?

 **STUDENTS DO:** Respond together: Circle and triangle.

TEACHER DO: Repeat process for Shape Mats 2, 3, 4 and 5 (or as long as time allows).

 **STUDENTS DO:** For each Shape Mat, build images using shape blocks.

TEACHER DO: As students work on each image, walk around the room to observe their progress and to answer questions and offer help, as needed. Note students who are doing well without guidance and those who may need additional instruction and practice.

Note to the Teacher: As you continue this activity, vary the questions. More advanced students may be asked to count all of the shapes. Encourage students to use positional math terms and counting when describing which shapes they use.



Share (5 minutes)

Directions

1. TEACHER SAY: I would like you to use your shape blocks to make your own new picture. You will have three minutes. Once you are finished, look at me and give a **Thumbs Up**.



STUDENTS DO: Build bigger shape using simple shapes.

TEACHER DO: As students work, walk around the room to observe their progress. Offer help as needed.

TEACHER SAY: I want you to share what you created with your **Shoulder Partner**.



STUDENTS DO: Share with **Shoulder Partner**.

TEACHER DO: Give students about 1 minute to share. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to share what they built.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

Note to the Teacher: If possible, have students store their shape blocks in plastic sandwich bags or envelopes for later use. Label the bag or envelope with each child's name or initials.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Combine simple shapes to compose pictures. Name 2-dimensional shapes. 	<ul style="list-style-type: none"> Behind Circle Next to Rectangle Square Triangle 	<ul style="list-style-type: none"> Calendar Math Area Shape blocks (or use Shape Blocks Blackline Master to create shape blocks) (one set per student) Student Shape Mats (See Shape Mats Blackline Master)
LESSON PREPARATION		
<ul style="list-style-type: none"> Print out or recreate Student Shape Mats (See Student Shape Mats Blackline Master.) <ul style="list-style-type: none"> There are four different shape mats in the Blackline Master. Each page contains two copies of one shape mat. This is to help reduce the number of copies you have to make, since you can cut the pages in half to create two shape mats. Also, you do not need to print out a set of shape mats for every student. If you print out enough sets for half of the class, you will have plenty since students will be working in pairs and will swap shape mats with another team when they are finished. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to jump up and count to 10. I will show you by jumping and counting first. Then we will do it together.

TEACHER DO: Model jumping and counting movement, count with each jump until you reach 10.

TEACHER SAY: Now it is your turn. Everyone stand. Let's jump and count together. We will count to 10 three times.



STUDENTS DO: Jump and count to 10 three times with the teacher.

TEACHER SAY: Fantastic jumping and counting. Give your **Shoulder Partner** a high five and have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: I will show you a shape mat with simple shapes that are combined to make a picture.

TEACHER DO: Display one of the shape mats from **Lesson 75**.

Note to the Teacher: This lesson refers to the rocket as an example, but choose any picture you prefer and adjust the lesson accordingly.

TEACHER SAY: What is this picture?



STUDENTS DO: Respond together: Rocket.

TEACHER SAY: Whisper in your hand the shapes you see that were combined to make this rocket.



STUDENTS DO: Whisper answer into hand.

TEACHER SAY: What shapes do you see?



STUDENTS DO: Raise hand to volunteer. Share if called on or listen actively to classmates.

TEACHER SAY: You said you see a rectangle, triangles, and circles. How many circles?



STUDENTS DO: Raise hands to volunteer. Share if called on or listen actively to classmates.

TEACHER DO: Display another of the shape mats from **Lesson 75**. Ask students to name and count shapes.



STUDENTS DO: Raise hands to volunteer. Share if called on or listen actively to classmates.

2. TEACHER SAY: Today I will give you and your **Shoulder Partner** a shape mat and shape blocks. You will work together to place the shape blocks on the correct place on the shape mat. Once you have made the picture on the shape mat, count how many of each shape you have. Then, you may swap shape mats with another pair of students.

TEACHER DO: Hand out shape mats and students' shape blocks from **Lesson 75**.



STUDENTS DO: Work with **Shoulder Partner** to place shape blocks on shape mat. Count shapes. Switch shape mats. Work with **Shoulder Partner** to place shapes on new shape mat.

TEACHER DO: Walk around the room to observe students' work. Offer help as needed. Ask questions about the shapes and positions. Collect all shape blocks.



Share (5 minutes)

Directions

1. TEACHER SAY: What have you learned about making pictures using shapes? Give me a **Thumbs Up** if you have ideas to share.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Share if called on to share or listen actively to classmates.

TEACHER DO: Note students' responses and ask questions to extend their thinking.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Combine simple shapes to compose original pictures. • Name 2-dimensional shapes. 	<ul style="list-style-type: none"> • Above • Behind • Below • Beside • Circle • In front of • Next to • Rectangle • Square • Triangle 	<ul style="list-style-type: none"> • Calendar Math Area • Ball • Shape blocks (or use Shape Blocks Blackline Master to create shape blocks) (one set per student) • Construction paper (one sheet per student) • Glue/glue stick



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today we will play Catch and Count.

TEACHER DO: Point to a student to stand. Toss the ball and say 1.



STUDENTS DO: Catch and count until 10. Repeat until everyone is standing.

TEACHER SAY: Good job catching and counting. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Yesterday you used shape mats and made pictures with shape blocks. Today you will have the chance to create your own picture using your shape blocks. First, I would like you to think about the shape mats you have seen and the pictures you have created in the last two lessons. Then, I want you to **Brainstorm** a design of your own. Once you get your shapes, practice making pictures.

TEACHER DO: Give students a few minutes to **Brainstorm**. As students are thinking, hand out shape blocks.



STUDENTS DO: **Brainstorm** then work with shapes to create a picture.

TEACHER DO: Circulate and help where needed. Ask students to describe their pictures. Refer to vocabulary word wall. Encourage students to use math positional terms. Praise students who do. When students are finished, use an **Attention Getting Signal**.

2. TEACHER SAY: Talk to your **Shoulder Partner** and explain the picture you created.

TEACHER DO: Provide a few minutes for students to share their pictures with their **Shoulder Partners**. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I am going to give you glue so you can glue down your shapes and finish your picture. Raise your hand if you have any questions before we move on to the next step.



STUDENTS DO: Raise hands to ask questions, if necessary. Glue down shapes to finish their pictures.

TEACHER DO: Circulate and help where needed. Continue to ask students to describe their pictures. Encourage them to use math terms. When students are finished, use an **Attention Getting Signal**. Collect glue and have students place their pictures on their tables for Share.



Share (5 minutes)

Directions

1. TEACHER SAY: We will take a **Gallery Walk** to look at each other's work. When we go to a museum, we walk around and look at works of art and objects from history. We will walk past displays of our friends' work. Give them compliments on their work and think about questions you may ask them.



STUDENTS DO: Take a **Gallery Walk**. Think about compliments and questions related to other students' work.

TEACHER DO: Ask students questions about the displays. Encourage praise, compliments, and questions related to their friends' work.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what their favorite display was and why.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to solve subtraction problems. Subtract within 5 using objects, drawings, and manipulatives. 	<ul style="list-style-type: none"> Difference Take away 	<ul style="list-style-type: none"> Calendar Math Area Picture showing five animals Circle cut outs to cover animals Paper plate Five falafel (images) Tape
LESSON PREPARATION		
<ul style="list-style-type: none"> Find or create a picture with five animals. Cover each animal with a circle. (See Chapter Preparation for instructions.) Draw, color, and cut out five falafel that will fit on a paper plate. Make math vocabulary cards for: take away and difference. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY:

- Twirl around 1 time.
- Put your arms up 2 times.
- Touch your toes 3 times.
- Do 4 jumping jacks.
- Wave your arms 5 times.
- Now hop in place 6 times.
- Stomp your feet 7 times.
- Tip toe 8 times.
- Bend your knees 9 times.
- Have a seat. Blow 10 tiny bubbles and let them float away.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very good moving and counting. Give your **Shoulder Partner** a high five.

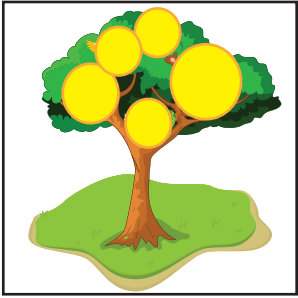


STUDENTS DO: High five **Shoulder Partner**.



Learn (25-30 minutes)

Directions



1. TEACHER DO: Display vocabulary cards: take away and difference. Display picture of five animals in a tree. Make sure that each animal is covered with a circle.

TEACHER SAY: What shape do you see in the picture?

STUDENTS DO: Respond together: Circle.

TEACHER SAY: Let's count the circles in this picture together.

STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: I will take away one circle. When I take away the circle I want you to notice the difference.

TEACHER DO: Take away one circle.

STUDENTS DO: Note difference.

TEACHER SAY: Lean and Whisper to your Shoulder Partner: When I took a circle away, was there a difference?

STUDENTS DO: Lean and Whisper to Shoulder Partner noting the difference.

TEACHER SAY: Raise a hand if you see a difference.

STUDENTS DO: Raise hand to show they notice a difference. Selected students describe the difference: an animal is showing now.

TEACHER SAY: When we take something away, it changes the thing we started with. It will be different. In this example, there are no longer five circles and now we can see an animal. Count to yourself how many circles are remaining after I took one away.

STUDENTS DO: Count circles to themselves.

TEACHER SAY: Let's count the circles together.

STUDENTS DO: Count aloud with teacher.



TEACHER SAY: I took one circle away and now there are four circles. I will take away one more circle. See if you can tell me the difference.

TEACHER DO: Repeat the process until no circles are left. Each time, ask students to identify the difference in the picture after a circle is taken away.

TEACHER SAY: When we take away, do things remain the same? Is there a difference? Think about it for a moment.

TEACHER DO: Give 30 seconds Think Time.

TEACHER SAY: When we take away there will be a difference. When we had five and took away one, the difference was four.

2. TEACHER DO: Display the paper plate with five falafel.

TEACHER SAY: I have five tasty falafel on my plate. I will call a classmate up to take some away.

TEACHER DO: Pull a Calling Stick.



STUDENTS DO: Selected student goes to the front of the room.

TEACHER SAY: _____ (Student's name) will take some away while your eyes are closed. When you open your eyes, see if you notice the difference. Close your eyes and no peeking.



STUDENTS DO: Seated students close eyes. Selected student takes two falafel.

TEACHER SAY: There were five falafel on the plate. Open your eyes and see if you notice the difference.



STUDENTS DO: Open eyes and note the difference.

TEACHER SAY: **Whisper** in your hand what the difference is.



STUDENTS DO: **Whisper** answer in hand.

TEACHER SAY: What is the difference?

TEACHER DO: Use **Calling Sticks** to select students.



STUDENTS DO: Selected students share their thinking. Possible answers include: two falafel are missing, three falafel are left, or there are not as many falafel on the plate. (All of these responses are correct.)

TEACHER SAY: There were five falafel on the plate. _____ (Student's name) took away two falafel. There are three falafel left. The difference is three.

TEACHER DO: Ask volunteer to be seated. Pull a **Calling Stick** to select another student.

TEACHER SAY: There are three falafel on the plate. _____ (Student's name) will take some away while your eyes are closed. When you open your eyes see if you notice the difference. Close your eyes and no peaking.



STUDENTS DO: Close eyes. Selected student takes away one falafel.

TEACHER SAY: There were three falafel on the plate. Open your eyes and see if you notice the difference.



STUDENTS DO: Open eyes and note the difference.

TEACHER SAY: **Whisper** in your hand what the difference is.



STUDENTS DO: **Whisper** answer in hand.

TEACHER SAY: What is the difference?



STUDENTS DO: Selected students share their thinking. Possible answers include: one falafel is missing, two falafel are left, or there are not as many falafel on the plate. (All of these responses are correct.)

TEACHER SAY: There were three falafel and _____ (Student's name) took one away. There are two falafel left. The difference is two.

TEACHER DO: Continue until there are no falafel left.

TEACHER SAY: When there are no longer any falafel we say we have zero. When we took the falafel away, the number on the plate kept getting less than what we started with. When we take away the difference is a smaller amount.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about what we did in math today. Share something you learned.

TEACHER DO: Give 30-60 seconds **Think Time**.


TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**.

 **STUDENTS DO:** **Shoulder Partners** share their thinking with each other.

TEACHER DO: Give 1 or 2 minutes for students to discuss. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partner**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share. Note students' thinking. Identify students who seem to have early understanding of subtraction concepts and students who share misconceptions or misunderstandings.

 **STUDENTS DO:** Share if called on to share or listen actively to classmates.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply strategies to solve subtraction problems.
- Subtract within 5 using objects, drawings, and manipulatives.

KEY VOCABULARY

- Difference
- Subtract
- Take away

MATERIALS

- Calendar Math Area
- Five large circles
- Tape
- Sets of 5 counters (one set per pair of students)

LESSON PREPARATION

- Gather sets of five counters (one set per pair of students).
- Cut out five large circles (one set for the teacher).
- Make math vocabulary card for: subtract.



Calendar and Movement (15-20 minutes)

Directions

1. **TEACHER DO:** Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. **TEACHER DO:** Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. We will do the same motions we did yesterday, but this time we will count down from ten. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY:

- Blow 10 tiny bubbles and let them float away.
- Bend your knees 9 times.
- Tip toe 8 times.
- Stomp your feet 7 times.
- Now hop 6 times.
- Wave your arms 5 times.
- Do 4 jumping jacks.
- Touch your toes 3 times.
- Put your arms up 2 times.
- Twirl around 1 time. Then have a seat.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very good moving and counting. Give your **Shoulder Partner** a high five.



STUDENTS DO: High five **Shoulder Partner**.




Learn (25-30 minutes)

Directions

1. TEACHER DO: Display vocabulary word cards: difference, take away, and subtract.

TEACHER SAY: Who can remind us what we did yesterday in Math class? What did we do? What did we learn? Give me a **Thumbs Up** to share your thinking.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Selected students share their thinking.

TEACHER SAY: We talked about taking away and finding the difference. We did that with circles on a picture and falafel on a plate. We learned that when we take away, there will be a difference.

TEACHER DO: Display four colored circles (consider taping them to the chalkboard).


TEACHER SAY: Yesterday, we started with five falafels and took some away. Let's start with a different number today to practice taking away and finding the difference. How many circles do I have up here?

 **STUDENTS DO:** Respond together: Four.

TEACHER SAY: I am going to take away some circles. See if you can tell me the difference. Give me a **Thumbs Up** when you know the difference.

TEACHER DO: Take away two circles.

TEACHER SAY: There were four circles. I took two circles away. What is the difference?

 **STUDENTS DO:** Give a **Thumbs Up** when they have found the difference. Selected student states the difference (or asks for help).

TEACHER SAY: There were four circles. I took two circles away. There are two circles left. The difference is two. Four take away two is two. Another way to say take away is subtract. I subtracted two circles. Let's try another one together.

TEACHER DO: Display three circles.


TEACHER SAY: How many circles do I have up here?

 **STUDENTS DO:** Respond together: Three.

TEACHER SAY: I am going to take away some circles. See if you can tell me the difference. Give me a **Thumbs Up** when you know the difference.

TEACHER DO: Take away two circles.

TEACHER SAY: There were three circles. I took two circles away. I subtracted two circles. What is the difference?

 **STUDENTS DO:** Give a **Thumbs Up** when they have found the difference. Selected student states the difference (or asks for help).

TEACHER SAY: There were three circles. I took two circles away. There is one circle left. The difference is one. Three take away two is one. Now I would like you to try some with your **Shoulder Partner**. I am going to give you and your partner a set of counters. When you get the counters, count them.

TEACHER DO: Hand out counters to each pair of students.

 **STUDENTS DO:** Count the counters.

TEACHER SAY: How many counters do you have?



STUDENTS DO: Respond together: Five.

TEACHER SAY: Good. You have five counters. Subtract one counter. That means you take one away. What is the difference? Raise your hand when you know.



STUDENTS DO: Work with partners to subtract one counter and find the difference. Raise hands to volunteer. Selected students answer the question.

TEACHER SAY: You had five counters. You subtracted – or took away – one counter. There are four counters left. The difference is four. You say, “The difference is four.”



STUDENTS DO: Repeat together: The difference is four.

TEACHER SAY: Five take away one is four. You say: Five take away one is four.



STUDENTS DO: Repeat together: Five take away one is four.

TEACHER SAY: Let’s try another one. Start with three counters.



STUDENTS DO: Make a group of three counters.

TEACHER SAY: Now subtract one counter. That means you take one away. What is the difference? Raise your hand when you know.



STUDENTS DO: Work with partners to subtract one counter and find the difference. Raise hands to volunteer. Selected students answer the question.

TEACHER SAY: You had three counters. You subtracted – or took away – one counter. There are two counters left. The difference is two. You say: The difference is two.



STUDENTS DO: Repeat together: The difference is two.

TEACHER SAY: I have a challenge for you. You and your partner will start with five counters. Get all five of your counters together now.



STUDENTS DO: Gather all five counters.

TEACHER SAY: Now, you and your partner decide how many you want to subtract, or take away. Talk about that now and decide.



STUDENTS DO: Talk to **Shoulder Partners** to decide how many counters they will subtract.

TEACHER SAY: Have you decided? Good. Go ahead and take the counters away. Take away the number of counters you and your partner decided on together and find the difference.



STUDENTS DO: Take away a number of counters from their set of five.

TEACHER SAY: Raise your hand if you and your partner took away one counter.



STUDENTS DO: Raise hands if they subtracted one counter.

TEACHER SAY: What is the difference?



STUDENTS DO: Respond together: Four.

TEACHER SAY: The difference is four. Five take away one is four. You say it.



STUDENTS DO: Repeat together: Five take away one is four.

TEACHER DO: Repeat for partners who took away two, three, four, and five counters). Have all students repeat the sentence: Five take away _____ (number) is _____ (number) each time partners identify the difference.

TEACHER SAY: You all did a wonderful job working on these problems. These kinds of problems – where we take away and find the difference – are called subtraction problems. We are working on subtraction problems just as the big kids do. Good job.

TEACHER DO: Collect counters.



Share (5 minutes)

Directions

1. TEACHER SAY: Can you think of any time in your daily life that you subtract or take away? Yesterday, I had three cookies and I ate one cookie, then two cookies, then all three cookies. I subtracted all three cookies. Think for a moment about a time when you or someone you know subtracted, or took some away.



STUDENTS DO: Think for 30-60 seconds about times they have subtracted (without realizing that is what they were doing).

TEACHER SAY: Give me a **Thumbs Up** if you have some ideas.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected students share their ideas about when they use subtraction in their daily lives.

TEACHER DO: Take note of students who have an early grasp of subtraction concepts and consider how you might pair or group them with students who would benefit from working with them.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Add and subtract within ten using a number line.

KEY VOCABULARY

- Difference
- Minus
- Subtract Take away

MATERIALS

- Calendar Math Area
- One red paper
- One green paper
- Math journal and pencil

LESSON PREPARATION

- Have one red paper and one green paper (at least 10 cm x 10 cm).



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. We will do the same motions we did yesterday – counting down from ten. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY:

- Blow 10 tiny bubbles and let them float away.
- Bend your knees 9 times.
- Tip toe 8 times.
- Stomp your feet 7 times.
- Now hop 6 times.
- Wave your arms 5 times.
- Do 4 jumping jacks.
- Touch your toes 3 times.
- Put your arms up 2 times.
- Twirl around 1 time. Then have a seat.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very good moving and counting. Give your **Shoulder Partner** a high five.



STUDENTS DO: High five **Shoulder Partner**.



Learn (25-30 minutes)

Directions


1. TEACHER DO: Draw a number line showing numbers one through ten on the chalkboard or somewhere all students can see. Students will refer to it as needed during game play.

TEACHER SAY: Today, we will play a game. I will pull a **Calling Stick** so that one of you can demonstrate with me.

TEACHER DO: Pull a **Calling Stick** to select a volunteer.

TEACHER SAY: If I hold up a green card, that means go forward one step.

TEACHER DO: Hold up green card and step forward.

 **STUDENTS DO:** Selected student steps forward while seated students observe.

TEACHER SAY: If I hold up a red card, that means subtract a step. You will go back one step.

TEACHER DO: Hold up red card and step back.

 **STUDENTS DO:** Selected students steps back while seated students observe.

TEACHER SAY: Let's practice together. Please stand.

 **STUDENTS DO:** Stand.

TEACHER DO: Hold up green card and step forward.

 **STUDENTS DO:** Step forward.

TEACHER DO: Hold up red card and step back.

 **STUDENTS DO:** Step back.

TEACHER SAY: Let's begin. Pay close attention.

TEACHER DO: Alternate between red and green until students grasp the concept.

2. TEACHER DO: Display number cards.

TEACHER SAY: Today we are going to practice taking away by stepping backward. Since we are taking away or subtracting we count backwards. The numbers are getting smaller. We will start at ten and we will count every step we take backwards. Let's try. If you need help, look at the number line on the chalkboard. Stand and make sure you have room. We will start counting at ten. Count: 10.

 **STUDENTS DO:** Stand and count: 10.

TEACHER SAY: Let's take one step back and as we step back, we will count back.

TEACHER DO: Step back and count: 9.

 **STUDENTS DO:** Step back and count: 9.

TEACHER SAY: Take another step back and count back.

TEACHER DO: Step back and count: 8.

 **STUDENTS DO:** Step back and count: 8.

TEACHER SAY: Take another step back and count back.

TEACHER DO: Step back and count: 7.



STUDENTS DO: Step back and count: 7.

TEACHER SAY: Take another step back and count back.

TEACHER DO: Step back and count: 6.



STUDENTS DO: Step back and count: 6.

TEACHER DO: Continue to count down to 1.



STUDENTS DO: Step back and count down to 1.

TEACHER SAY: We took ten steps backward and our numbers got smaller. Now let's take ten steps forward. We are stepping forward, so we will count forward. Step forward and count with me.

TEACHER DO: Repeat the process above, but start at one. Step forward and count forward to ten.



STUDENTS DO: Step forward and count from one to ten with teacher.



3. TEACHER DO: Hand out math journals and have students open them to **Lesson 80**.



STUDENTS DO: Open journals to page for **Lesson 80**.

TEACHER SAY: There is a number line in your journal showing numbers 1 through 10. You will use that number line to help you solve a little story problem I am going to tell you. Raise your hand if you need help finding the right page.



STUDENTS DO: Raise hands if they need help.

TEACHER SAY: I am going to tell you a story. It is a math story. At the end, you will tell me the answer, but I will help you along the way. Listen carefully. Put your finger on the number 4 on your number line.



STUDENTS DO: Put fingers on the number 4 on their number lines in their journals.

TEACHER SAY: Our story is about a little fennec fox named Farah. Farah Fox lives at number 4, so that is where our story begins. It is Farah Fox's birthday and she wants to have a party. But, first she must gather supplies and invite her friends. She goes five doors forward to buy a cake from her friend Karim Camel.

TEACHER DO: Hold up the green paper.

TEACHER SAY: Move your finger five numbers forward to buy a cake from Karim Camel. Hold it there.



STUDENTS DO: Move fingers five numbers forward.

TEACHER SAY: What number is your finger on?



STUDENTS DO: Respond together: 9.

TEACHER SAY: Next, Farah Fox went back three doors to invite her friends Miriam Monitor and Heba Hare to the party.

TEACHER DO: Hold up the red paper.

TEACHER SAY: Move your finger three numbers back to invite Miriam and Heba to the party. Hold it there.



STUDENTS DO: Move fingers three numbers back.

TEACHER SAY: What number is your finger on?



STUDENTS DO: Respond together: 6.

TEACHER SAY: Then, Farah went back four doors to buy some cups, plates, and decorations for the party.

TEACHER DO: Hold up the red paper.

TEACHER SAY: Move your finger four numbers back to some cups and plates for the party.



STUDENTS DO: Move fingers four numbers back.

TEACHER SAY: What number is your finger on?



STUDENTS DO: Respond together: 2.

TEACHER SAY: Farah went forward six doors to invite her friends Jana Jackal and Ahmed Aoudad to the party.

TEACHER DO: Hold up the green paper.

TEACHER SAY: Move your finger six numbers forward to invite Jana and Ahmed to the party. Hold it there.



STUDENTS DO: Move fingers six numbers forward.

TEACHER SAY: What number is your finger on?



STUDENTS DO: Respond together: 8.

TEACHER SAY: Next, Farah went back one door to buy balloons for the party.

TEACHER DO: Hold up the red paper.

TEACHER SAY: Move your finger back one number to buy balloons. Hold it there.



STUDENTS DO: Move fingers one number back.

TEACHER SAY: What number is your finger on?



STUDENTS DO: Respond together: 7.

TEACHER SAY: Finally, Farah took all of the party materials to the party hall. The party hall is three doors forward.

TEACHER DO: Hold up the green paper.



STUDENTS DO: Move fingers three number forward.

TEACHER SAY: Where is the party hall? Raise your hand if you know.



STUDENTS DO: Raise hands to answer the question. Selected student responds: 10.

TEACHER SAY: If your finger is on ten, great job. Everyone had an amazing time at Farah's party and I had a wonderful time counting forward and back with you.



Share (5 minutes)

Directions

1. TEACHER SAY: You all did a fabulous job counting forward and backward. You did well at both, but one was more difficult than the other. Why?

TEACHER DO: Give 30-60 seconds of **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner** about your thinking.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give students a minute to discuss. Then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hand to share.

TEACHER DO: Call on students with hand raised to share. Allow students time to share.



STUDENTS DO: Share if called on or listen actively to classmates.

KINDERGARTEN I




Mathematics

Chapter 3

Lessons 81-90

Overview

Lessons 81-90

COMPONENT	DESCRIPTION	TIME
 Calendar and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15–20 minutes
 Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25–30 minutes
 Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from friends' perspectives.	5-10 minutes

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - Using objects or drawings to represent a problem
 - Decomposing numbers into pairs in more than one way (e.g., $5 = 2 + 3$ and $5 = 4 + 1$)
 - Finding the number of objects that make 10 when added to any number 1–9
- Employ units of money until 10 Egyptian pounds in addition and subtraction problems.

NUMBERS AND OPERATIONS IN BASE TEN:

- Collect and classify data using objects and drawings (up to 10).
- Recognize different units of money, including 1 Egyptian pound, 5 pounds, 10 pounds.

GEOMETRY:

- Match and sort 3-dimensional shapes.

LESSON	INSTRUCTIONAL FOCUS
81	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 5.
82	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 5. • Create and illustrate a subtraction problem. • Draw triangles, squares, and circles.
83	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 5. • Use math vocabulary and strategies to explain their thinking.
84	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 10. • Use math vocabulary and strategies to explain their thinking. • Create and illustrate a subtraction problem. • Draw triangles, squares, rectangles, and circles.
85	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 10. • Use math vocabulary and strategies to explain their thinking.
86	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 10. • Create and illustrate a subtraction problem. • Use math vocabulary and strategies to explain their thinking.
87	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Collect, count, and record data. • Classify data.
88	Students will: <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Compare two-dimensional and three-dimensional shapes • Identify three-dimensional shapes: spheres, cubes, and cones. • Sort three-dimensional shapes.

89

Students will:

- Participate in Calendar Math activities.
- Identify and sort 1 LE, 5 LE, and 10 LE notes.
- Identify the value of 1 LE, 5 LE, and 10 LE notes.

90

Students will:

- Participate in Calendar Math activities.
- Identify the value of 1 LE and 5 LE notes.
- Apply understanding of the value of money to solve problems.

Chapter Preparation

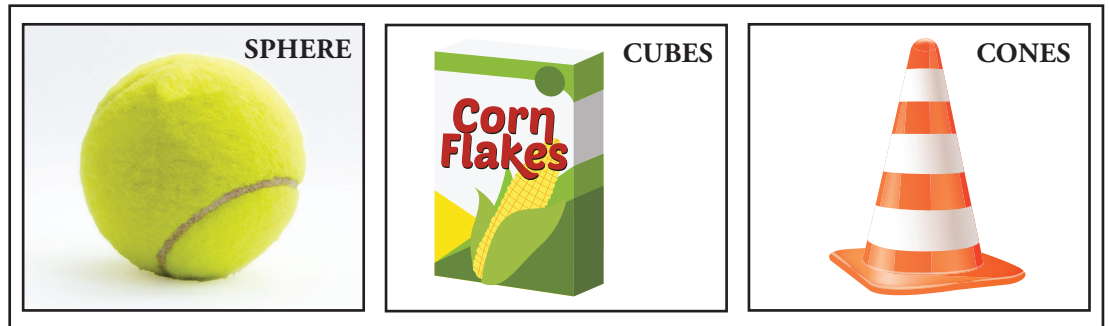
Subtraction Concepts		
Reduction	Whole/Part	Comparison
There are 5 apples. I eat 3. How many are left? 2 apples	A pie is cut into 6 pieces. I ate some. There are 3 pieces left. How many pieces did I eat? 3 pieces	I have 2 oranges, you have 3 oranges. How many more oranges do you have? 1 more oranges
How many remain?	How many are X?	How many more/less?

- For **Lesson 81**:
 - Gather sets of 5 counters and a cup (one set per students).
- For **Lesson 82**:
 - Gather a large sheet of paper to use as a poster (use chart paper or tape together several smaller sheets of paper). Posters created and used in **Lessons 82 and 84** are needed to complete all activities in **Lessons 83 and 85**, respectively.
- For **Lesson 83**:
 - Gather one set of 5 counters and a cup for each pair of students. Students will play the Cup Game from **Lesson 72** using 5 counters instead of 10.
- For **Lesson 85**:
 - Gather one set of 10 counters and a cup for each pair of students. Students will play the Cup Game using 10 counters.
- For **Lesson 86**:
 - Create a large poster to demonstrate a subtraction story. An example may show a tree with 6 apples on it and 4 apples on the ground, or a flower with 5 bees on it and 2 bees flying away.
 - Have crayons available for students to color their subtraction illustrations.

Favorite Colors					
Red	Orange	Yellow	Green	Blue	Purple

- For **Lesson 87**:
 - Print out or create the following shape cut-outs 5 cm in size: 3 rectangles, 4 circles, 6 squares, 2 triangles. (See Shape Cut-Outs Blackline Master.)
 - * Tape the shapes in random order onto a poster or sheet of chart paper. The shapes will be moved around during the lesson.
 - Print out or create 5-cm squares to collect student data. (See the Data Collection Squares Blackline Master.)
 - Make a class bar graph called Favorite Colors. The graph should have 6 columns, each about 6 cm wide. Label the columns red, orange, yellow, green, blue, and purple using the corresponding colors.

- For **Lesson 88**:
 - Create vocabulary cards for two-dimensional, three dimensional, data, cone, cube, and sphere. If possible, include images on the vocabulary cards. If appropriate in your school context, ask students to bring in reusable material such as cereal boxes to add to the 3-D Shape Museum.
 - Gather three-dimensional objects that are spheres, cubes, and cones. Examples include globe, different size balls, orange, cube tissue box, cube cardboard box, ice cream cone, party hat, and traffic cone. Designate an area in the classroom for these objects titled: Three-Dimensional Shape Museum.



- For **Lessons 89 and 90**:
 - Create vocabulary card for pound.
 - Prepare bags with play money for each small group of students. The bags should contain ten 1 LE notes, two 5 LE notes, and one 10 LE note. Students will use these bags in Lessons 89, 90, 91, 92, and 93. (You will need to prepare additional bags for those lessons.)
 - Have real money or a detailed play money to teach students the characteristics of the 1 LE, 5 LE, and 10 LE notes.
- For **Lesson 90**:
 - Have one 5 LE note and four 1 LE notes for a demonstration.
 - Have the poster, prices, and items from the market used on Lessons 8 and 9 in Chapter 3 of Multidisciplinary Theme 3.

Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

- **Attention Getting Signal**
- **Calling Sticks**
- **Count Off**
- **Gallery Walk**
- **I Do, We Do, You Do**
- **Imagine That**
- **Lean and Whisper**
- **Pair/Share**
- **Role Play**
- **Shoulder Partner**
- **Think Time**
- **Thumbs Up**
- **Turn and Talk**
- **Wait Time**
- **Whisper**

Materials Used

Calendar math area



Math journal and pencils



Vocabulary cards

Teacher set of large dot cards

Student sets of counters in a cup



Poster or chart paper



Markers



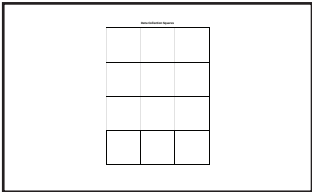
Ball



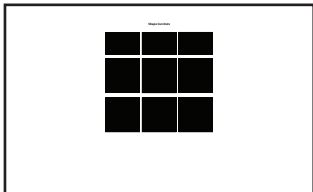
Crayons



Data collection squares

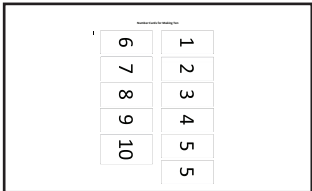


Shape cut-outs



Various objects representing 3-dimensional shapes (for shape museum)

Number cards

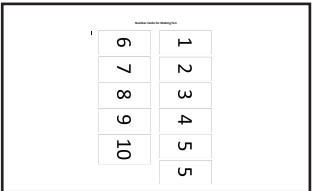


Real or play egyptian pound notes (1 LE, 5 LE, 10 LE)



Student sets of assorted play money in bags

Number cards 1 to 10



OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to subtract within 5. 	<ul style="list-style-type: none"> Difference Opposite Subtraction Take away 	<ul style="list-style-type: none"> Calendar Math Area Vocabulary cards: subtract, take away, difference, opposite Math journal and pencil Large teacher set of dot cards Set of 5 counters in a cup (one set per student)
LESSON PREPARATION		
<ul style="list-style-type: none"> Gather sets of 5 counters in a cup (one set per student). 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today I am going to show you dot cards one at a time. I want you to clap the number of dots you see. For example, if I hold up the dot card with 5 dots on it, you will clap 5 times. Let's try it.



STUDENTS DO: Join the teacher in the movement and counting pattern.

TEACHER DO: Repeat using a different dot card, pausing for students to clap.

TEACHER SAY: Turn to your **Shoulder Partner** and give them a handshake and have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake then sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: In our last math lesson, you and a partner used a number line to move forward and then move backward. During share time we talked about counting backward. We decided it is more challenging to move and count backward because we usually move or count forward. Raise a hand if you remember what we discussed about moving and counting backward.



STUDENTS DO: Raise hand to show they want to share. Selected students share their thinking.

TEACHER DO: Display vocabulary cards: subtraction, take away, opposite, and difference.

TEACHER SAY: Subtraction is the opposite of addition. We practiced counting backward to prepare us for subtraction. When we subtract, the answer is smaller than the number we started with. Subtraction is the way we find how many are left when we take some away. Subtraction is finding the difference between two numbers.



TEACHER DO: Hand out math journals and have students open to the page for **Lesson 81**.



STUDENTS DO: Open their math journals to the page for **Lesson 81**.

TEACHER SAY: The last time we played this game, our number line had 10 numbers. Today, I have taken away 5 numbers and now it has 5 numbers.

2. TEACHER DO: Hand out cups to each student.

TEACHER SAY: Count the number of counters in your cup. Give me a **Thumbs Up** when you know how many counters are in your cup.



STUDENTS DO: Count the number of counters in their cups. Give a **Thumbs Up** when they are ready.

TEACHER SAY: How many objects are in your cup?



STUDENTS DO: Respond together: 5.

TEACHER SAY: I will give you a number. You will put that many counters on your number line. So, if I say the number is 3, put 3 counters on your number line. The first goes on 1. The second goes on 2. Where will the third counter be placed?



STUDENTS DO: Respond together: 3.

TEACHER SAY: Do that now.



STUDENTS DO: Place 3 counters on their corresponding numbers.

TEACHER DO: Place 3 counters on display.

TEACHER SAY: We have 3 counters. We will subtract 2. That means I will take away 2 counters.

TEACHER DO: Take away 2 counters.



STUDENTS DO: Take away 2 counters.

TEACHER SAY: When we take away 2 counters, show me on your fingers how many counters you have left.



STUDENTS DO: Show 1 finger.

TEACHER SAY: Three minus 2 equals 1. We can also say the difference between 3 and 2 is 1. The difference is how many remain after I remove some. Three minus 2 equals 1.

TEACHER DO: Continue giving students amounts within 5, until you observe that most of them have grasped the concept.

Note to the Teacher: Start with taking away 1, or with 1 as the difference, and move on to other options within 5. Do not yet have students take away 0 or have a difference of 0. This is a more complex concept that will be covered later. The number line helps engage students and make the concept more concrete. Without the number line and counters the activity is more abstract.



Share (5 minutes)

Directions

1. TEACHER SAY: Think quietly for a moment about what you learned about subtraction today. What is subtraction? What can we call it? How can we describe it? What happens when we subtract?



STUDENTS DO: Think quietly about what they learned about subtraction.

TEACHER SAY: Now, talk to your **Shoulder Partner** about your learning. You have about one minute.



STUDENTS DO: Talk to **Shoulder Partners** about subtraction.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share their subtraction problem.



STUDENTS DO: Share if called on to share or listen actively to students.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply strategies to subtract within 5.
- Create and illustrate a subtraction problem.
- Draw triangles, squares, and circles.

KEY VOCABULARY

- Difference
- Minus
- Subtraction

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Set of 5 counters in a cup (one set per student)
- Poster paper and marker

LESSON PREPARATION

- Display poster paper for showing subtraction drawings.



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today, we are going to stand up and stomp and count to 10. I will show you by stomping and counting first. Then we will do it together.

TEACHER DO: Model stomping and counting movement, each stomp receives a number: right foot down on 1, left foot down on 2, right foot down on 3, and so on.

TEACHER SAY: Now it is your turn. Everyone stand. Let's stomp and count together. We will count to 10 three times.



STUDENTS DO: Stomp and count to 10 three times with the teacher.

TEACHER SAY: Super stomping and counting. Give your **Shoulder Partner** a handshake and have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake and sit.



Learn (25-30 minutes)

Directions

*Note to the Teacher: So far students have learned the reduction aspect of subtraction, which focuses on taking away. There is also the part/whole concept and the comparison concept. Providing all of the different ways to understand subtraction gives students a deeper understanding of subtraction and its relationship to addition. Students need this understanding to build numeracy. Refer to the Subtraction Concepts chart below. This lesson uses the **I Do, We Do, You Do** teaching strategy. You will reuse the poster you make today in the following lessons.*

1. TEACHER DO: Display poster paper.

Subtraction Concepts		
Reduction	Whole/Part	Comparison
There are 5 apples. I eat 3. How many are left? 2 apples	A pie is cut into 6 pieces. I ate some. There are 3 pieces left. How many pieces did I eat? 3 pieces	I have 2 oranges, you have 3 oranges. How many more oranges do you have? 1 more orange
How many remain?	How many are X?	How many more/less?

TEACHER SAY: In our last math lesson, we used a number line to help us subtract. We had counters that we took away to help us with subtraction. We found the difference between two numbers. Our answer was smaller than the number we started with. Today, I will show you another way to find the difference. Raise a quiet hand if you can remember what the difference is.



STUDENTS DO: Raise hands to volunteer. Share if called on or listen actively to students.

TEACHER SAY: We will use drawings to help us practice subtraction that involves taking away. Count with me as I draw fish.

TEACHER DO: Draw and count 4 fish.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: I have drawn 4 fish. Pretend there is a fisherman and he catches 2 fish. Two are taken away. I wonder how I can show 2 fish being taken away.

TEACHER DO: Give **Think Time**.

TEACHER SAY: Raise a hand if you have an idea how I can show them being caught by the fisherman.



STUDENTS DO: Raise hand to volunteer. Share if called on to share or listen actively to friends.

TEACHER DO: Accept reasonable answers (draw a fisherman, erase it, cover it up, draw a new picture, cross it out, and so on).

TEACHER SAY: I think the easiest way for me to show the fish being taken away by the fisherman is to cross them out. I will cross out 2 fish. Use your finger in the air and cross out 2 fish with me.

TEACHER DO: Cross out 2 fish.



STUDENTS DO: Use fingers in the air to cross out 2 fish.

TEACHER SAY: Now let's count together how many out of the 4 remain in the water.



STUDENTS DO: Count 2 fish aloud with the teacher.

TEACHER SAY: There are 2 fish still in the water. We can say that 4 minus 2 equals 2. We can also say the difference between 4 and 2 is 2. In my drawing, I crossed out 2 fish to show that the fisherman took 2 away. When we use a drawing to help us subtract, it is a good strategy to cross out what we are taking away.

TEACHER DO: Draw 4 squares.

TEACHER SAY: These shapes represent basbousa. **Whisper** in your hand what shape the delicious basbousa is.



STUDENTS DO: **Whisper** their answers into their hands.

TEACHER SAY: I used a square to represent the delicious basbousa. Pretend that you can smell it. It is delicious. I will eat 3 pieces. Am I going to really eat the paper?



STUDENTS DO: Respond together: No.

TEACHER SAY: How I can show that I ate 3 without having to eat the paper? **Lean and Whisper** your idea to your **Shoulder Partner**.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: Crossing them out is a good strategy. I will pull a **Calling Stick** and you will show how to cross out 3 squares to show that I ate 3 pieces of basbousa. Everyone else, use your finger in the air and cross them out with your friend.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student crosses out 3 squares, while seated students use their fingers to pretend to cross out 3 squares.

TEACHER SAY: **Whisper** in your hand how many squares remain.



STUDENTS DO: **Whisper:** 1.

TEACHER SAY: I had 4 basbousa and I crossed out 3 to represent that I ate 3. Now I have only 1 left. We can say that 4 minus 3 is 1. We can also say that the difference between 4 and 3 is 1. Let's try another subtraction problem using batata. Batata is round. What shape do you know how to draw that is round?



STUDENTS DO: Respond together: Circle.

TEACHER SAY: Yes, we have learned how to draw a circle. I will use circles for the batata. Raise your hand if you can draw 5 circles on the board.



STUDENTS DO: Raise hands to volunteer. Selected student draws 5 circles.

TEACHER SAY: We have 5 batata. We used a circle to represent them since they are round in shape like a circle. What treat do these 5 circles represent?



STUDENTS DO: Respond together: Batata.

TEACHER SAY: I want to give 3 batata to my friend. What strategy can I use to show that I am giving 3 batata away? Give me a **Thumbs Up** if you know.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected student shares strategies, which should include crossing out 3 batata. Student who shares crossing out strategy goes to the front of the room and crosses out 3 batata.

TEACHER SAY: _____ (Student's name) crossed out 3 batata to represent giving my friend 3 batata. **Lean and Whisper** to your **Shoulder Partner** how many remain.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: How many are left?



STUDENTS DO: Respond together: 2.


2. TEACHER SAY: We can say that 5 minus 3 is 2. We can also say that the difference between 5 and 3 is 2. Let's try another subtraction problem. I will hand out your math journal so that you can make your own drawing to help you subtract as I did.



TEACHER DO: Hand out math journals.

TEACHER SAY: Another treat I like are figs. I am going to use triangles to represent figs. Open your math journals and find the page for Lesson 82. Draw 3 triangles on the page.

TEACHER DO: Use **Calling Sticks**, call a student volunteer to the front of the room.


 **STUDENTS DO:** Draw 3 triangles in their math journals. Selected student draws 3 triangles on the poster.

TEACHER SAY: I am full from my other snacks so I will only eat 1 fig. Are you going to eat your paper?

 **STUDENTS DO:** Respond together: No.

TEACHER SAY: No, that would be silly and paper does not taste delicious. We will cross out 1 fig to show we ate 1 fig. Cross out 1 fig.

TEACHER DO: Use **Calling Sticks**, have a student cross out 1 fig.

 **STUDENTS DO:** Cross out 1 fig in their math journals. Selected student crosses out one fig on the poster.

TEACHER SAY: Use your fingers to show me the difference. How many figs are remaining?

 **STUDENTS DO:** Show 2 fingers.

TEACHER SAY: Three minus 1 equals 2. The difference between 3 and 1 is 2.

TEACHER DO: Continue giving subtraction stories within 5 as time allows. Note any students who may benefit from additional instruction and practice.

Share (5 minutes)

Directions

1. TEACHER SAY: I think you are ready to make up your own subtraction story and draw it in your math journal. After you have drawn your picture and taken some away, **Turn and Talk** to your **Shoulder Partner** and share your subtraction story and drawing.

 **STUDENTS DO:** Draw a subtraction story in their math journals, then share with their **Shoulder Partners**.

TEACHER DO: Give ample time for students to work and share. Offer help where needed. Then use an **Attention Getting Signal**.

2. TEACHER SAY: Now we will take a **Gallery Walk** and look at our friends' subtraction drawings.

 **STUDENTS DO:** Take a **Gallery Walk**.

TEACHER DO: Ask questions during the **Gallery Walk**. Praise work. Check for understanding by asking a student to explain their drawing.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply strategies to subtract within 5.
- Use math vocabulary and strategies to explain their thinking.

KEY VOCABULARY

- Difference
- Minus
- Subtraction

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Poster from **Lesson 82**
- Set of 5 counters in a cup (one set per student)

LESSON PREPARATION

- Display poster with drawings from **Lesson 82**.



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to practice counting while reaching up and down. We will reach up and count, then reach down and count.

TEACHER DO: Model reaching up and down while counting to 10. Repeat three times.

TEACHER SAY: Everyone stand and count with me. We will count to 10 three times.



STUDENTS DO: Count aloud and reach up and down with the teacher three times.

TEACHER SAY: Good work. Give your **Shoulder Partner** a high five and a low-five, then have a seat.



STUDENTS DO: Give **Shoulder Partner** high five and low-five and sit.



Learn (25-30 minutes)

Directions

*Note to the Teacher: This lesson uses the drawings from **Lesson 82** and the **I Do, We Do, You Do** teaching strategy. Students will count with their fingers by putting some down and leaving some up. All students may not yet have the fine motor skills to easily use their fingers to subtract. Placing fingers on the table may help those who are having difficulty.*

Be sure to distinguish between motor skill control and difficulty with the conceptual understanding of reduction. Fine motor skills can develop with time, but make sure the student has a conceptual understanding of reduction even if they do not yet have the fine motor skills to use their fingers to demonstrate.

1. TEACHER SAY: Yesterday, we used drawings to find the difference in subtraction. Today, we will use our fingers. Let's look at the fish I drew.

TEACHER DO: Display poster paper from **Lesson 82**. Point to the fish.

TEACHER SAY: There were 4 fish to begin with, so I will hold up 4 fingers to represent the 4 fish. You may also hold up 4 fingers.



STUDENTS DO: Hold up 4 fingers.

TEACHER SAY: The fisherman caught 2 fish. In the drawing I crossed out 2 fish to represent this. To show catching 2 fish using my fingers, I will put 2 fingers down. Try it with me.

TEACHER DO: Put 2 fingers down, showing 2 fingers remaining.



STUDENTS DO: Put 2 fingers down, showing 2 fingers remaining.

TEACHER SAY: Four minus 2 equals 2. It is important to be able to use our fingers to find the difference. I will not always have counters to count. I will not always have paper to make drawings. I will have my fingers. Let's look at the next problem with the basbousa. What shape did I use to represent the basbousa I have?



STUDENTS DO: Respond together: Square.

TEACHER SAY: I will hold up 4 fingers to represent the basbousa. We crossed out 3 squares to show I ate 3 basbousa. How many fingers should I put down?



STUDENTS DO: Hold up 4 fingers. Respond together: 3.

TEACHER SAY: I will put down 3 fingers to represent eating 3 pieces.

TEACHER DO: Put down 3 fingers. Leave 1 remaining.



STUDENTS DO: Put down 3 fingers. Leave 1 remaining.

TEACHER SAY: I used my fingers to show that 4 minus equals 1. We had another subtraction problem where 5 circles represented batata. We crossed out 3 circles to show that I gave my friend 3 batata.

TEACHER DO: Show circles.

TEACHER SAY: When I say go, I would like you to **Turn and Talk** to your **Shoulder Partner**. You will use your fingers to show 5 batatas and then use your fingers to show giving away 3, just like in the drawing. As you use your fingers, explain what is happening. Then your partner will do the same. Go.



STUDENTS DO: **Turn and Talk** to **Shoulder Partner**. Represent the subtraction problem using their fingers. Explain the problem to their partner.

TEACHER DO: Circulate around the room and listen as students explain. Note the students who do not have a conceptual understanding of subtraction. Give students ample time to work then use an **Attention Getting Signal**.

TEACHER SAY: What is the answer? What is 5 minus 3?



STUDENTS DO: Respond together: 2.

2. TEACHER SAY: Now I will say some subtraction problems aloud and you will use your fingers, not your voice, to show the difference. What are we using to show the difference?



STUDENTS DO: Respond together: Fingers.

TEACHER SAY: Voices off, fingers ready: I have 5 stickers, I gave 2 stickers to my friend. Show me the difference on your fingers.



STUDENTS DO: Hold up 5 fingers, then take away 2 to show 3 fingers.

TEACHER SAY: Nice job. 5 minus 2 equals 3. We can also say that the difference between 5 and 2 is 3. Voices off, fingers ready: There were 4 birds in a tree, 1 flew away. Show me the difference on your fingers.



STUDENTS DO: Hold up 4 fingers, then take away 1 to show 3 fingers.

TEACHER SAY: Nice job. 4 minus 1 equals 3. We can also say that the difference between 4 and 3 is 1.

3. TEACHER DO: Display a cup with 5 counters.

TEACHER SAY: Let's try this differently. I will give you and your **Shoulder Partner** a cup with 5 counters inside. Show me on your fingers how many counters I said was in each cup.



STUDENTS DO: Show 5 fingers.

TEACHER SAY: One of you will be the cup holder first. The cup holder will put some counters on the table where your partner can see them. The other counters will remain in the cup. Do not let your partner see what is inside the cup.

TEACHER DO: Shake the cup a little and take out 3 counters.

TEACHER SAY: Your partner is the guesser. The guesser has to guess how many counters remain in the cup. The guesser counts the counters they can see and uses their fingers to figure out how many are in the cup. Count with me.



STUDENTS DO: Count to 3 with the teacher.

TEACHER SAY: There are 3 counters we took out of the cup. The guesser cannot see what remains in the cup. How can the guesser figure out what is in the cup without looking?

TEACHER DO: Make thinking face. Give **Think Time**.

TEACHER SAY: Raise your hand if you have an idea.



STUDENTS DO: Raise hand to volunteer. Share if called on to share or listen actively to students.

TEACHER SAY: Let's use our fingers to help us. Remember how many counters were in the cup? Hold up 5 fingers.



STUDENTS DO: Hold up 5 fingers.

TEACHER SAY: We took out 3 counters. Now put 3 fingers down.

TEACHER DO: Put 3 fingers down, showing 2.



STUDENTS DO: Put 3 fingers down, showing 2.

TEACHER SAY: How many fingers am I holding up?



STUDENTS DO: Respond together: 2.

TEACHER SAY: Now I will look in the cup and count to check my answer. Count with me.



STUDENTS DO: Count to 2 aloud with the teacher.

TEACHER SAY: Give your brain a high five if you knew there were 2 counters in the cup.



STUDENTS DO: Pat their heads.

TEACHER SAY: You will now have time to play the game. Raise your hands if you need help and I will come help you.

 **STUDENTS DO:** Play Cup Game with **Shoulder Partners**.

TEACHER DO: Walk around the room to observe students' work and help where needed. Encourage students to use fingers. If they struggle give them a five frame to use.




Share (5 minutes)

Directions

1. TEACHER SAY: Great work using your fingers. I will give you your math journal. Find the drawings from our previous lesson, Lesson 82. Work with your partner to use your fingers and explain yesterday's drawing to your **Shoulder Partner**.

 **STUDENTS DO:** **Turn and Talk** to **Shoulder Partner** using drawings from math journal.

 **TEACHER DO:** Hand out math journals and help students locate their drawings from **Lesson 82**, if necessary. Give ample time for students to represent subtraction with their fingers. Then, use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to explain with their **Shoulder Partner** one of the drawings you looked at and to show subtraction using your fingers.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share with **Shoulder Partner** if called on to share or listen actively to friends.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Apply strategies to subtract within 10. • Use math vocabulary and strategies to explain their thinking. • Create and illustrate a subtraction problem. • Draw triangles, squares, rectangles, and circles. 	<ul style="list-style-type: none"> • Difference • Minus • Subtraction 	<ul style="list-style-type: none"> • Calendar Math Area • Large teacher set of dot cards • Math journal and pencil • Poster paper and marker
LESSON PREPARATION		
<ul style="list-style-type: none"> • Display poster paper for subtraction drawings. 		



Calendar and Movement (15-20 minutes)

Directions

1. **TEACHER DO:** Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. **TEACHER DO:** Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today I am going to show you dot cards one at a time. I want you to hop the number of dots you see. For example, if I hold up the dot card with 6 dots on it, you will hop 6 times. Stand and let's try it.



STUDENTS DO: Join the teacher in the movement and counting pattern.

TEACHER DO: Repeat using a different dot card, pausing for students to hop.

TEACHER SAY: Turn to your **Shoulder Partner** and give them a high five and have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five then sit.



Learn (25-30 minutes)

Directions

*Note to the Teacher: This lesson uses the **I Do, We Do, You Do** teaching strategy and follows the same format as **Lesson 82**, albeit within 10 instead of 5.*

1. **TEACHER SAY:** You are doing such a fantastic job subtracting, we will try some larger numbers. I will do one on the board first, then we will do one together, and then you will do one on your own. There were 6 birds flying high in the sky. Birds are difficult to draw so I will use triangles to represent the birds.

TEACHER DO: Draw 6 triangles on the poster.

TEACHER SAY: Two of those birds go away to sit in a tree. I will cross out 2 birds to show they are no longer flying.

TEACHER DO: Cross out 2 triangles.

TEACHER SAY: Let's count together the birds that remain flying in the sky.



STUDENTS DO: Count to 4 aloud with the teacher.

TEACHER SAY: 4 birds are still flying in the sky. 6 minus 2 equals 4. The difference between 6 and 2 is 4. Now I will hand out your math journals so that you can make your own drawings to help you subtract. Open your math journals to the page for Lesson 84.



TEACHER DO: Hand out math journals.



STUDENTS DO: Open their math journals to the page for Lesson 84.

TEACHER SAY: I have 7 books I want to read to the class. Think about what shape those 7 books are.

TEACHER DO: Give ample **Think Time**.

TEACHER SAY: We will use 7 rectangles. Draw 7 rectangles in your math journal to represent books.



STUDENTS DO: Draw 7 rectangles in math journal.

TEACHER DO: Draw 7 rectangles on the poster.

TEACHER SAY: Since we are using larger numbers, go back and count your books. When you are certain you have 7, give a **Thumbs Up**.



STUDENTS DO: Count rectangles. Ensure there are 7 and give a **Thumbs Up**.

TEACHER SAY: I want to read all 7 books to you. So far, I have read you 3 of those books. We will cross out rectangles to show that I have read a book. How many books should I cross out?



STUDENTS DO: Respond together: 3.

TEACHER DO: Use **Calling Sticks** to select a student helper to cross out 3 rectangles on the board.

TEACHER SAY: Thank you _____ (student's name). Now the rest of you will cross out 3 rectangles to show that I have read 3 books to you.



STUDENTS DO: Cross out 3 rectangles.

TEACHER SAY: Look at the rectangles that are not crossed out. Those represent the books I have not read to you yet. How many books do I still have left to read? Show me the answer using your fingers.



STUDENTS DO: Count remaining rectangles. Show 4 fingers.

TEACHER SAY: Let's count the remaining books together.



STUDENTS DO: Count to 4 aloud with the teacher.

TEACHER SAY: You are correct. 7 minus 3 equals 4. The difference between 7 and 3 is 4.

2. TEACHER SAY: Let's try another subtraction problem. Another treat I like are figs. What shape shall we draw to show figs?



STUDENTS DO: Respond together: Triangle.

TEACHER SAY: Good idea. Draw 8 triangles in your math journal.

TEACHER DO: Draw 8 triangles on the poster.



STUDENTS DO: Draw 8 triangles in their math journals.

TEACHER SAY: Since we are using larger numbers, go back and count your figs. When you are certain you have 8, give a **Thumbs Up**.

 **STUDENTS DO:** Count triangles. Ensure there are 8 and give a **Thumbs Up**.

TEACHER SAY: You will eat 4 of those figs. No, you will not eat the paper. You will cross out triangles to indicate that you have eaten those figs.

TEACHER DO: Use **Calling Sticks**, have student helper cross out 4 triangles on the board.

TEACHER SAY: Thank you, _____ (student's name). The rest of you cross out 4 triangles.

 **STUDENTS DO:** Cross out 4 triangles.

TEACHER SAY: Use your fingers to show me the difference. How many figs are remaining?

 **STUDENTS DO:** Count figs and show 4 fingers.

TEACHER SAY: Eight minus 4 equals 4. The difference between 8 and 4 is 4.

TEACHER DO: Make note of any students whose answers are incorrect. Continue giving subtraction stories within 10. Have student helpers come to the front to draw pictures on the poster. Keep the posters with the drawings for future lessons.



Share (5 minutes)

Directions

1. TEACHER SAY: Now, you are going to make up your own subtraction story and draw it in your math journal. This time, you can start with any number up to 10. After you have drawn your picture and taken some away, **Turn and Talk** to your **Shoulder Partner** and share your drawing.

 **STUDENTS DO:** Draw a subtraction story within 10 in their math journals, then share with their **Shoulder Partners**.

TEACHER DO: Give ample time for students to work and share. Offer help where needed. Then use an **Attention Getting Signal**.

2. TEACHER SAY: Now we will take a **Gallery Walk** and look at our friends' subtraction drawings.

 **STUDENTS DO:** Take a **Gallery Walk**.

TEACHER DO: Ask questions during the **Gallery Walk**. Praise work. Check for understanding by asking a student to explain their drawing.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to subtract within 10. Use math vocabulary and strategies to explain their thinking. 	<ul style="list-style-type: none"> Difference Minus Subtraction 	<ul style="list-style-type: none"> Calendar Math Area Poster from Lesson 84 Math journal and pencil Set of 10 counters in a cup (one set per student)
LESSON PREPARATION		
<ul style="list-style-type: none"> Display poster with drawings from Lesson 84. Gather sets of 10 counters and a cup (one set per pair of students). 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Today we are going to practice counting while hopping. We will hop backward and count backward starting at 10. Then we will hop forward and count forward.

TEACHER DO: Model hopping backward while counting down from 10, then forward.

TEACHER SAY: Everyone please stand; hop and count backward with me.



STUDENTS DO: Count aloud and hop backward then forward with the teacher.

TEACHER SAY: Nice hopping and counting. Give your **Shoulder Partner** a handshake. Then, have a seat.



STUDENTS DO: Give **Shoulder Partner** handshake and sit.



Learn (25-30 minutes)

Directions

*Note to the Teacher: This lesson uses the poster with drawings from **Lesson 84** and the **I Do, We Do, You Do** teaching strategy. The lesson format mirrors **Lesson 83**.*

1. TEACHER SAY: In our last math lesson, we used drawings to find the difference in subtraction with numbers greater than 5. Today, we will use our fingers to do the same. Let's look at the picture I drew.

TEACHER DO: Display poster paper from **Lesson 84**. Point to 6 triangles.

TEACHER SAY: There were 6 birds flying in the sky. **Lean and Whisper** to your **Shoulder Partner** what shape I used to represent those birds.

 **STUDENTS DO:** Lean and Whisper to Shoulder Partner.

TEACHER SAY: Even though you were whispering, I heard the right answer: triangles. There are 6 to begin with, so I will hold up 6 fingers. Hold up 6 fingers using both hands.

TEACHER DO: Hold up 5 fingers on one hand and 1 finger on the other hand.

 **STUDENTS DO:** Hold up 6 fingers, mirroring the teacher.

TEACHER SAY: Two birds landed in a tree. In the drawing I crossed out the triangles to represent this. With my fingers, I will put 2 fingers down, like this. Try it with me.

TEACHER DO: Put 2 fingers down, showing 4 fingers remaining.

 **STUDENTS DO:** Put 2 fingers down, showing 4 fingers remaining.

TEACHER SAY: 6 minus 2 equals 4. It is important to be able to use our fingers to find the difference. I will not always have counters to count. I will not always have paper to make drawings. I will have my fingers. Let's look at the next problem with the books. Put all your fingers down so you are ready.

 **STUDENTS DO:** Put all fingers down.

TEACHER SAY: Let's look at the next subtraction problem. We started with 7 books. Turn to your Shoulder Partner. Both of you use your fingers to show 7.

 **STUDENTS DO:** Turn to Shoulder Partners and hold up 7 fingers.

TEACHER SAY: Now, use your fingers to show that we have read 3 of the books. As you use your fingers, explain what is happening. Then your partner will do the same. Go.

 **STUDENTS DO:** Work with Shoulder Partner to solve, demonstrate, and explain the subtraction problem.

TEACHER DO: Circulate around the room and listen as students explain. Note the students who do not have a conceptual understanding of subtraction. Then use an Attention Getting Signal.

Note to the Teacher: Students may show 7 as 5 on one hand and 2 on the other or may show it as a different combination of fingers. If you notice students doing this, you may decide to have those students share their strategy with the class. Praise all methods that show the correct number of fingers because all are accurate and acceptable. This is a good teachable moment to explain that different methods can lead to the correct answer.

2. TEACHER SAY: Now I will say some subtraction problems aloud and you will use your fingers, not your voice, to show the difference. What are we using to show the difference?

 **STUDENTS DO:** Respond together: Our fingers.

TEACHER SAY: Voices off, fingers ready: I saw 8 Fennec foxes. Two ran away. Show me the difference on your fingers.

 **STUDENTS DO:** Hold up 8 fingers, then take away 2 to show 6 fingers.

TEACHER SAY: Nice job. 8 minus 2 equals 6. The difference between 8 and 2 is 6. Voices off, fingers ready: There were 7 Nile monitors on the shore. One swam away. Show me the difference on your fingers.

 **STUDENTS DO:** Hold up 7 fingers, then take away 1 to show 6 fingers.

TEACHER SAY: Nice job. 7 minus 1 equals 6. The difference between 7 and 6 is 1.

TEACHER DO: Give more subtraction problems within 10. Ask a student helper to come to the front and demonstrate.

*Note to the Teacher: If time permits, play the Cup Game from **Lesson 83**, but within 10 instead of 5.*

3. TEACHER SAY: Now we will play the Cup Game. This time you will have 10 counters in your cup. The rules are the same as before. Decide who will go first as the cup holder and who will go first as the guesser.



STUDENTS DO: Play Cup Game.

TEACHER DO: Circulate around the room helping where needed. Encourage students to use fingers. If they struggle, give them a ten frame to use.



Share (5 minutes)

Directions



1. TEACHER DO: Hand out math journals, help students locate drawings from **Lesson 84**.

TEACHER SAY: Great work using your fingers to find the difference. I will give you your math journal. Find the drawings from our previous lesson, Lesson 84. Work with your partner to solve the subtraction problems using your fingers. Then, explain to your **Shoulder Partner** how you solved the problem.



STUDENTS DO: Work with **Shoulder Partners** to solve subtraction problems using their fingers. Explain how they solved the problem.

TEACHER DO: Provide ample time for students to represent subtraction with their fingers and explain their thinking. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to explain with their **Shoulder Partners** one of the drawings you looked at and how you solved the subtraction problem using your fingers.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share with **Shoulder Partner** if called on to share or listen actively to friends.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to subtract within 10. Create and illustrate a subtraction problem. Use math vocabulary and strategies to explain their thinking. 	<ul style="list-style-type: none"> Difference Minus Subtraction 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Posters illustrating a subtraction story Crayons
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a poster showing an example of a subtraction illustration (see Chapter Preparation). 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY: Make sure you count as you do each movement.

- Blow 1 huge bubble and pop it.
- Blow 3 tiny bubbles and give them a tiny pop.
- Stand on one leg and hop 5 times.
- Using both legs, jump 7 times.
- Stand tall and pretend you are a water fountain. Spray water in the air with your hands 9 times.



STUDENTS DO: Follow each direction, doing each movement the correct number of times and counting aloud.

TEACHER SAY: Fantastic counting and moving. Give your **Shoulder Partner** a high five and have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five and sit.



Learn (25-30 minutes)

Directions

*Note to the Teacher: This lesson uses the **Imagine That** and **Role Play** instructional strategies. Students may still use their fingers to count, but they will also practice using just their imaginations. You may model using fingers at times but strive to engage imaginations with active movement as you tell each story. You are modeling thinking skills.*

1. TEACHER SAY: Today, you will use your imaginations to help you solve subtraction problems. Raise a quiet hand and tell us what an imagination is.



STUDENTS DO: Raise hands to volunteer. Share if called on to share or listen actively to friends.

TEACHER SAY: We have learned to subtract. We have used counters, drawings, and our fingers to help us subtract. Now, we will use our imaginations to help us subtract. Let's practice. Use your imagination and blow up 3 balloons.

TEACHER DO: Pretend to blow up 3 balloons.



STUDENTS DO: Pretend to blow up 3 balloons.

TEACHER SAY: Now pop 2.

TEACHER DO: Pretend to pop 2 balloons.



STUDENTS DO: Pretend to pop 2 balloons.

TEACHER SAY: Think in your brain and then show me on your fingers: How many balloons are left?



STUDENTS DO: Show answer using their fingers.

TEACHER SAY: If we had 3 and popped 2, tell me how many are left.



STUDENTS DO: Respond together: 1.

TEACHER DO: Model $3 - 2 = 1$ on your fingers.

TEACHER SAY: Three minus 2 equals 1. The difference between 3 and 2 is 1. Now, stand up and picture a tall apple tree. There are 6 apples on the tree.



STUDENTS DO: Stand and imagine an apple tree with 6 apples.

TEACHER SAY: Use your imagination and **Role Play** with me to reach up high and pick 3 apples.



STUDENTS DO: Pretend to pick 3 apples.

TEACHER SAY: Think in your brain and then show me on your fingers. How many apples are left up in the tree?



STUDENTS DO: Show answer using their fingers.


TEACHER SAY: If there were 6 apples in the tree and we picked 3, tell me how many are left.



STUDENTS DO: Respond together: 3.

TEACHER SAY: 6 minus 3 equals 3. The difference between 6 and 3 is 3. You have great imaginations. Let's think of another. Imagine a beautiful flowering bush. There are 5 purple flowers on this bush. Can you see them in your mind? They smell wonderful. We will pick 4 flowers.

TEACHER DO: Pretend to smell and then pick 4 flowers.

 **STUDENTS DO:** Pretend to smell and then pick 4 flowers.

TEACHER SAY: Think in your brain and then show me on your fingers: How many flowers are left on the bush?

 **STUDENTS DO:** Show answer on fingers.

TEACHER SAY: If there were 5 flowers on the bush and we picked 4, tell me how many are left.

 **STUDENTS DO:** Respond together: 1.

TEACHER SAY: 5 minus 4 equals 1. The difference between 5 and 4 is 1. Great work. Have a seat.

 **STUDENTS DO:** Sit.


2. TEACHER SAY: Great work using your imagination. Work with your **Shoulder Partner** to use your imagination and think of a subtraction story.

 **STUDENTS DO:** **Pair/Share** with **Shoulder Partner**.

TEACHER DO: Give ample time for students to **Pair/Share**. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people with their **Shoulder Partner** to share their subtraction story.


TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share as partners if called on to share or listen actively to friends.

3. TEACHER SAY: Very good. Today, you are going to create your own subtraction stories, but first I want to show you an example I created.

TEACHER DO: Display the poster with your subtraction example and explain it to students.

TEACHER SAY: Previously we have shown subtraction with a simple sketch and crossed out to indicate subtraction. Look at my illustration of a subtraction story.

 **STUDENTS DO:** Look at the teacher's example of a subtraction story.

TEACHER SAY: Give a **Thumbs Up** if you would like to share what you see.

 **STUDENTS DO:** Give **Thumbs Up** to volunteer. Selected students share or listen actively to friends.


TEACHER SAY: Do you see anything crossed out? Your subtraction story will not have anything crossed out. We are not using that strategy today. Think about how I showed subtraction without crossing out. **Turn and Talk** to your **Shoulder Partners**. Discuss how I illustrated subtraction.


 **STUDENTS DO:** **Turn and Talk** to **Shoulder Partners**.

TEACHER SAY: Give me a **Thumbs Up** if you and your partner would like to share your thinking.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Selected students explain their thinking and discuss how the teacher's drawing showed subtraction.

TEACHER SAY: Very good. You and your partner are now going to **Brainstorm** your own idea for a subtraction story. Think about how you will illustrate it. Talk about it together.

 **TEACHER DO:** Give students time to **Brainstorm**. While they are thinking and talking, hand out math journals and crayons.

 **STUDENTS DO:** Work with their **Shoulder Partners** to **Brainstorm** and then illustrate a subtraction story in their math journal.

TEACHER DO: Walk around and observe students as they work. Listen to their conversations and look at their drawings to identify students who have a strong understanding of subtraction and students who may need additional instruction and practice. Offer help as needed.



Share (5 minutes)

Directions


1. TEACHER SAY: We will take a **Gallery Walk**. You will walk past your friends' journals, looking at their work as though it is a display in a museum. In museums we look but we do not touch.

 **STUDENTS DO:** Take a **Gallery Walk**.

TEACHER DO: Give students time to look at their classmates' work. Ask students questions about their illustrations. Then use an **Attention-Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three students and their partners to share and explain their subtraction stories.

TEACHER DO: Pull three **Calling Sticks**.

 **STUDENTS DO:** Share and explain their subtraction stories if called on or listen actively to friends.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Collect, count, and record data. Classify data. 	<ul style="list-style-type: none"> Data 	<ul style="list-style-type: none"> Calendar Math Area Ball Favorite Colors bar graph Crayons (red, orange, yellow, green, blue, purple) Data Collection Squares (See Data Collection Squares Blackline Master.) Shape Cut-Outs (See Shape Cut-Outs Blackline Master.)
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare shape cut-outs. (See Chapter Preparation.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math with ball.

TEACHER SAY: Let's do Movement Math. Today we will play "Catch and Count." This time we will count backwards. I will point to a student and say 10. That student must stand and catch the ball. Then, point at a classmate and say 9. That student must stand and catch the ball. We will count back until we reach 0. Then, we start counting up again from 0 to 10. The game repeats until everyone is standing. Make sure you have room.

TEACHER DO: Point to a student to stand. Toss the ball and say 10.



STUDENTS DO: Catch and count going down until 0, then repeat counting forward and backward again until everyone is standing.

TEACHER SAY: Good job counting back and forth. Please have a seat.

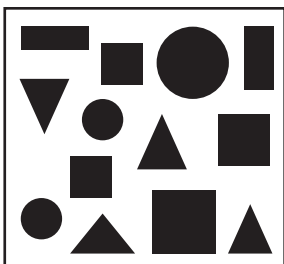


STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions



Note to the Teacher: Be sure to begin the lesson with the shapes displayed in random order on the poster or chart paper. An important learning experience for students in this lesson on data is to compare and organize the shapes.

1. TEACHER DO: Display poster with randomly-placed shape cut-outs.

TEACHER SAY: Addition and subtraction are important. There are other parts of math that are also important. Everyone also needs to know how to collect and classify data. We might even use addition and subtraction when we work with data. Data is information like facts, numbers,

or measurements. Look at this poster. There are many shapes we can count. **Lean and Whisper** to your **Shoulder Partner** the names of some shapes you see.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: If I call on you, tell me a shape you see.

TEACHER DO: Use **Calling Sticks** to select volunteers to identify shapes until are named.



STUDENTS DO: Share if called on or listen actively to friends.

TEACHER SAY: On this paper we can see rectangles, circles, squares, and triangles. I want to collect some data about these shapes. Remember that data is information. Many times the information we collect is in the form of numbers. For example, I want to know how many we have of each shape. Think about how we might get that data. How could we collect that information?

TEACHER DO: Give **Think Time**.

TEACHER SAY: **Turn and Talk** to your **Shoulder Partner**. How might we find out how many there are of each shape?



STUDENTS DO: **Turn and Talk** to **Shoulder Partner**.

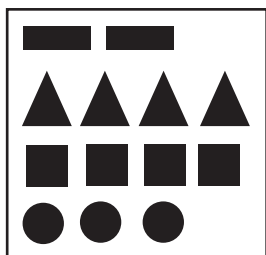
TEACHER SAY: Raise your hand if you would like to share what you discussed.



STUDENTS DO: Raise hands to volunteer. Share if called on or listen actively to friends.

TEACHER SAY: We need to count our data. Counting is easier if we first organize our data. We can organize our data by putting all of the similar shapes together.

TEACHER DO: Place the triangles together in a row. Use **Calling Sticks** to have student helpers align the other shapes.



STUDENTS DO: Line up shapes if called on or observe friends.

TEACHER SAY: Now we will count the shapes and write the data, or the number, next to that shape. I would like some volunteers to help me.

TEACHER DO: Use **Calling Sticks** to select volunteers to go to the poster and help you count the shapes. Record the data.



STUDENTS DO: Selected students count the shapes with the teacher. Seated students count aloud and observe as the data is recorded.

TEACHER SAY: Congratulations, we organized our data, we counted the data, and we recorded our data. Now we know how many of each shape we have. Think about how our shapes look now compared to how they looked in the beginning. Think about why it was important for us to organize our data before we counted it.



STUDENTS DO: Think about the way the data is now organized and why it is important.

TEACHER SAY: Raise your hands to share your thinking.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking.

2. TEACHER SAY: Next, we will collect data about our class. I will give each of you a square. Think about the colors red, orange, yellow, green, blue, and purple. Decide which is your favorite color, then use that crayon to color your square.

TEACHER DO: Hand out squares and crayons. Display the chart titled Favorite Colors.



STUDENTS DO: Choose a favorite color. Color their square that color.

TEACHER DO: Provide time for students to color their squares. After a few minutes, introduce the Favorite Colors graph.

TEACHER SAY: Look at the graph I created. There is no data on this graph because we have not shared our favorite colors yet. Look at each column on this graph. Each column is labeled with the name of a color. This is where we will record our data. I will call you up _____ (one-at-a-time, by table, by row) to attach your square to the graph to record your favorite color. So, if you chose red as your favorite color, you will tape your red square above the word red in the red column.

TEACHER DO: Call students up (in whatever way you choose) to attach their square.



STUDENTS DO: Attach their squares to the corresponding columns.

TEACHER SAY: We have collected our data. Now, let's count and record our data. Help me count how many votes there are for each color and I will record the number at the top.

TEACHER DO: Count the squares in each column and write the totals at the top.



STUDENTS DO: Count the squares in each column aloud with the teacher.

TEACHER SAY: Think in your brain which color is the favorite. How can you tell which color is the most favorite in our classroom? **Lean and Whisper** to your **Shoulder Partner** what the favorite color of the class is and how you can tell.



STUDENTS DO: **Lean and Whisper** to their **Shoulder Partners** which color is the favorite and how they can tell.

TEACHER SAY: Which color is the most favorite in our classroom? How can you tell? Raise your hand to share your thinking.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking. Some students may note that the favorite color had the most votes (or the largest number). Others may note that the favorite color has the tallest column or the most squares.

TEACHER SAY: Most of us chose _____ (color name) as our favorite color. Think in your brain which color is the least favorite. How do you know it is the least favorite? **Lean and Whisper** to your **Shoulder Partner**.



STUDENTS DO: **Lean and Whisper** to their **Shoulder Partners** which color is the least favorite and how they can tell.

TEACHER SAY: Which color is the least favorite in our classroom? How can you tell? Raise your hand to share your thinking.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking. Some students may note that the least favorite color had the least votes (or the smallest number). Others may note that the least favorite color has the shortest column or the fewest squares.

Note to the Teacher: Discuss any other trends you notice in your class data. For example, are there any colors with the same number of votes? You can also model subtraction by comparison by saying things such as, "Green has 3 fewer votes than blue."



Share (5 minutes)

Directions

1. TEACHER SAY: This data – these numbers – are useful. Now I know which color crayon I need the most and which I need the least. Think in your brain: How else could this data be helpful?



STUDENTS DO: Think about how else they could use the data.

TEACHER SAY: Turn and Talk to your **Shoulder Partner** and discuss how else can we use this data?



STUDENTS DO: Turn and Talk to **Shoulder Partner**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share a way they can use this data.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to friends.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Compare two-dimensional and three-dimensional shapes • Identify three-dimensional shapes: spheres, cubes, and cones. • Sort three-dimensional shapes. 	<ul style="list-style-type: none"> • Cone • Cube • Sphere • Three-dimensional • Two-dimensional • Length • Width • Height 	<ul style="list-style-type: none"> • Calendar Math Area • Shapes for Shape Museum (cans, balls, boxes) • Vocabulary cards : two-dimensional, three dimensional, cone, cube, and sphere
LESSON PREPARATION		
<ul style="list-style-type: none"> • Create a Three-dimensional Shape Museum with real examples of spheres, cones, and cubes that students can touch. (See Chapter Preparation). • Designate an area for the Shape Museum. • Create vocabulary cards: two-dimensional, three dimensional, cone, cube, and sphere. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY:

- Twirl around 1 time.
- Put your arms up 2 times.
- Touch your toes 3 times.
- Do 4 jumping jacks.
- Wave your arms 5 times.
- Hop in place 6 times.
- Stomp your feet 7 times.
- Tip toe 8 times.
- Bend your knees 9 times.
- Have a seat. Blow 10 tiny bubbles and let them float away.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very good moving and counting. Give your **Shoulder Partner** a high five.

 **STUDENTS DO:** High five **Shoulder Partner**.




Learn (25-30 minutes)

Directions

Note to the Teacher: Before the lesson, set up an area of the classroom with a collection of three-dimensional shapes. Do not yet organize the shapes by type. Students will do so as part of the lesson. If you have a poster of two-dimensional shapes, you can use it to launch the lesson.

TEACHER SAY: Raise your hand if you can tell me a shape we have learned.

 **STUDENTS DO:** Raise hands to share. Share if called on or listen actively to friends.

TEACHER SAY: The shapes you named – triangle, circle, square, and rectangle – can all be drawn on paper. They are flat. A special name for shapes that are flat and can be drawn on paper is two-dimensional shapes. Two-dimensional shapes have two dimensions – length and width. Say two-dimensional with me.

 **STUDENTS DO:** Repeat together: Two-dimensional.

TEACHER SAY: Today, I will introduce you to some shapes that are not flat. They cannot be drawn on paper like a two-dimensional shape. These shapes are called three-dimensional shapes because they have three dimensions – length, width, and height. Height is a mathematical way of saying that something is not flat.

TEACHER DO: Hold up a cube.

TEACHER SAY: You may know this shape as a box. The mathematical name for this shape is cube. Say cube.

 **STUDENTS DO:** Respond together: Cube.

TEACHER SAY: Is this cube flat?

 **STUDENTS DO:** Respond together: No.

TEACHER SAY: If I draw a square on the board, it will have length and width. But the cube has length, width, and height (point to illustrate). What flat shape do you see on the sides of this cube? **Whisper** your answer into your hand.

 **STUDENTS DO: Whisper:** Square.

TEACHER SAY: The sides of this cube are made of squares. Let's count together how many squares are on this cube.

TEACHER DO: Count the sides aloud, pointing to each side as you count. To make it easier for student to see, hold the cube still and move your hand around to point to the four sides, then point to the top and the bottom of the cube.

 **STUDENTS DO:** Count to 6 aloud with the teacher.

TEACHER SAY: There are 6 squares on this cube. Think about other cubes you have seen. **Turn and Talk** to your **Shoulder Partner** about where you have seen a cube. While you are thinking and talking to your **Shoulder Partner**, please pass this cube around.

 **STUDENTS DO: Turn and Talk** to **Shoulder Partner**. Pass the cube around.

TEACHER SAY: Raise a hand to share where you have seen a cube.



STUDENTS DO: Raise hands to volunteer. Selected students share their ideas.

TEACHER DO: Acknowledge good examples of cubes. Hold up a sphere.

TEACHER SAY: You know this shape as a ball. The mathematical name for this shape is sphere. Say sphere.



STUDENTS DO: Respond together: Sphere.

TEACHER SAY: Is this sphere flat?



STUDENTS DO: Respond together: No.

TEACHER SAY: What flat shape does this remind you of? **Whisper** your answer into your hand.



STUDENTS DO: Whisper: Circle.

TEACHER SAY: A sphere is similar to a circle. A circle has length and width, but is flat. A sphere has height. It has length, width, and height and is not flat. Think about other spheres you have seen. **Turn and Talk** to your **Shoulder Partner** about where you have seen a sphere. While you are thinking and talking to your **Shoulder Partner**, please pass this sphere around.



STUDENTS DO: Turn and Talk to **Shoulder Partner**. Pass around sphere.

TEACHER SAY: Raise a hand to share where you have seen a sphere.



STUDENTS DO: Raise hands to volunteer. Selected students share their ideas.

TEACHER DO: Acknowledge good examples of spheres. Hold up a cone.

TEACHER SAY: You may have seen this shape. This shape is called a cone. Say cone.



STUDENTS DO: Respond together: Cone.

TEACHER SAY: Is this cone flat?



STUDENTS DO: Respond together: No.

TEACHER SAY: What shape do you see when I hold up the cone? **Whisper** your answer into your hand.



STUDENTS DO: Whisper: Triangle.

TEACHER SAY: I see a triangle. The bottom is flat. What flat shape do you see on the bottom of this cone? **Whisper** your answer into your hand.



STUDENTS DO: Whisper: Circle.

TEACHER SAY: A cone has a circle on the bottom. The circle is flat. Think about other cones you have seen. **Turn and Talk** to your **Shoulder Partner** about where you have seen a cone. While you are thinking and talking to your **Shoulder Partner**, please pass this cone around.



STUDENTS DO: Turn and Talk to **Shoulder Partner**. Pass around the cone.

TEACHER SAY: Raise a hand to share where you have seen a cone.




STUDENTS DO: Selected students share their ideas.

TEACHER DO: Acknowledge good examples of cones.

TEACHER SAY: I would like your help in creating a Three-dimensional Shape Museum for our classroom. I have brought in some three-dimensional shapes. I have spheres, cones, and cubes. I need your help sorting the shapes.

TEACHER DO: Display three-dimensional shapes for the museum. Gather the shape vocabulary cards and hold each one up as you say the vocabulary word.

TEACHER SAY: This vocabulary card says cube. This vocabulary card says sphere. This vocabulary card says cone. How can I use the cards to help me sort the three-dimensional shapes? Raise your hand if you have an idea.

 **STUDENTS DO:** Raise hands to volunteer. Selected students share their ideas. Students may suggest grouping the shapes by placing them near the vocabulary cards.

TEACHER DO: Place vocabulary cards in the Three-dimensional Shape Museum.

TEACHER SAY: I will hold up a shape. You will say the name and I will ask one of you to put the shape where it goes.

TEACHER DO: Hold up one shape at a time. After students identify the shape, call on a student to place the shape in the correct area. Repeat until all of your shapes are classified and sorted.

 **STUDENTS DO:** Say the name of each shape and point to designated area.

Share (5 minutes)

Directions

1. TEACHER SAY: You did a great job sorting three-dimensional shapes. Give yourself a pat on the back.

 **STUDENTS DO:** Pat their backs.

TEACHER SAY: We will go on a **Gallery Walk**. We will walk past the Three-dimensional Shape Museum. Today, I will ask you not to touch. But later, when you have time – perhaps after you have finished an assignment – you may visit the museum and touch the shapes.

TEACHER DO: Line up students and walk them past the Three-dimensional Shape Museum. Be sure to encourage students to visit the museum when they have free time.

 **STUDENTS DO:** Engage in the **Gallery Walk**, observing the sorted three-dimensional shapes.

TEACHER SAY: You will have the opportunity to add to our Three-dimensional Shape Museum. **Turn and Talk** to your **Shoulder Partner** about an object you might bring in from home. Is it a sphere, cone, or cube?

 **STUDENTS DO:** **Turn and Talk** to **Shoulder Partner**.

TEACHER SAY: It is important that you get permission from your parent to bring in an object from home. Do not bring in an object unless you have asked for permission first.

Note to the Teacher: Send home a letter to parents explaining the activity and outlining some guidelines. Suggest the students find recycled materials such as cardboard boxes in the shape of cubes, and that the family does not need to spend any money on the project.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Identify and sort 1 LE, 5 LE, and 10 LE notes. Identify the value of 1 LE, 5 LE, and 10 LE notes. 	<ul style="list-style-type: none"> Pound 	<ul style="list-style-type: none"> Calendar Math Area Number cards Ten 1 LE, two 5 LE, and one 10 LE notes for demonstration. Money bag for each student filled with assorted notes
LESSON PREPARATION		
<ul style="list-style-type: none"> Have number cards ready for Movement Math. Gather ten 1 LE, two 5 LE, and a 10 LE note. Create bags of play money with an assortment of 1 LE, 5 LE, and 10 LE notes for each student. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do one of my favorites. Let's go back to the zoo. I am going to give you a direction and a number of times to do it. Listen carefully.

- Stand on 1 leg like a flamingo.
- Pretend you are a lion and roar 2 times.
- Pretend you are a kangaroo. Jump 3 times.
- Pretend you are a turtle. Stick your head out of your shell 4 times.
- Pretend you are a crocodile. Use your arms to chomp down 5 times.
- Reach up and pull 6 monkeys out of the trees.
- Pretend you are a giraffe and eat 7 leaves overhead.
- Pretend you are an elephant and stomp 8 times.
- Pretend you are an eagle and flap your giant wings 9 times.
- Pretend you are a gorilla and beat your chest 10 times.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Great job. Give your **Shoulder Partner** a handshake and have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: In our last math lesson, I asked you to ask your parents if you could bring in a sphere, cone, or cube from home. If you brought in one of those shapes, get them out now to show the class. Ask your friends to tell you what shape it is. Once you have shared your shapes, add them to our Three-dimensional Shape Museum.



STUDENTS DO: Show the shapes they brought in, ask friends to identify them, and add them to the Three-dimensional Shape Museum.

Note to the Teacher: Naming a sphere, cube, and cone is not an instructional focus after this lesson. However, students will benefit from repeated review and practice and from playing with the shapes in the Three-dimensional Shape Museum. Consider adding to the museum throughout the remainder of the school year.

2. TEACHER DO: If students are not already sitting in groups, arrange them into small groups of 4 or 5.

TEACHER SAY: We have been talking about needs and wants in our Multidisciplinary lessons. We created pictures of goods and sorted them for our classroom market. Let's **Popcorn** around and tell me some needs.



STUDENTS DO: Popcorn examples of needs. Answers might include water, healthy food, clothing, and shelter.

TEACHER SAY: Yes, we need those things to be safe and healthy. Let's **Popcorn** around and tell me some wants.



STUDENTS DO: Popcorn examples of wants. Answers might include toys, desserts, and candy.

TEACHER SAY: Yes, those are fun things we want, but we do not necessarily need them to be healthy. How do we get the things we need and want? Raise your hand if you have an idea.



STUDENTS DO: Raise hands to volunteer. Selected students answer the question. Students should note that we buy many of the things we need and want.

TEACHER SAY: We often use money to buy things we need and want. Today, we will take a closer look at our money – the Egyptian pound. Raise your hand if you can share some places you have seen people exchanging money and buying things they need or want.



STUDENTS DO: Raise hands to volunteer. Selected students describe places they have seen money exchanged for needs and wants. Answers might include bank, market, clothing store, advertisements, or television.

3. TEACHER SAY: Today, we will take a closer look at money. I will give each of you a bag with some pound notes. Listen carefully to the directions so you will know what I want you to do with the money.

TEACHER DO: Hand out a bag of money to each small group of students. Display a 1 LE note.

TEACHER SAY: Take out a 1 LE note. Look at the front. Look at the back. What are some things you notice?



STUDENTS DO: Take out a 1 LE note. Look closely at both sides.

TEACHER SAY: Turn and Talk to your **Shoulder Partner**. Tell them what you see on the pound.



STUDENTS DO: Turn and Talk to **Shoulder Partner**.

TEACHER DO: Give students time to share and then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hands to share. Selected students share their thinking and observations.

TEACHER SAY: You can observe things carefully. Well done.

TEACHER DO: Explain the meanings of the markings on the front and back. Include the color and shape and any writing that is visible.

TEACHER SAY: Now, take out a 5 LE note. Look at the front. Look at the back. What are some things you notice?



STUDENTS DO: Take out 5 LE note. Look closely at both sides.

TEACHER SAY: Turn and Talk to your **Shoulder Partner**. Tell them what you see on the 5 LE.



STUDENTS DO: Turn and Talk to **Shoulder Partner**.

TEACHER DO: Give students time to share and then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hands to share. Selected students share their thinking and observations.

TEACHER SAY: Good observations. You noticed some things that are the same and some things that are different about the 1 LE note and the 5 LE note.

TEACHER DO: Explain the meanings of the markings on the front and back. Include the color and shape and any writing that is visible. Hold up one 5 LE note.

TEACHER SAY: This is worth 5 pounds. You can tell because it has the number 5 on it.

TEACHER DO: Hold up one 1 LE note.

TEACHER SAY: This is worth 1 pound. You can tell because it has the number 1 on it. Five 1 LE notes is worth the same value as one 5 LE note. We can trade one 5 LE note for five 1 LE notes. There are more 1 LE notes, so it might seem as though these notes would be worth more, but think of the value of each note. When we think about the value of money, we have to pay attention to how much each note is worth.

TEACHER DO: Display one 10 LE note.

TEACHER SAY: This is one 10 LE note. It has a 1 on it, but 1 is not the value. **Lean and Whisper** to your **Shoulder Partner** the value of this note.



STUDENTS DO: Lean and Whisper to **Shoulder Partner**.

TEACHER SAY: A 10 LE note is worth 10 pounds. Find a 10 LE note in your bag. Look at the front. Look at the back. What are some things you notice?



STUDENTS DO: Take out a 10 LE note. Look closely at both sides.

TEACHER SAY: Turn and Talk to your **Shoulder Partner**. Tell them what you see on the 10 LE note.



STUDENTS DO: Turn and Talk to **Shoulder Partner**.

TEACHER DO: Give students time to share and then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hands to share. Selected students share their thinking and observations.

TEACHER SAY: Great observations. You identified some things about the 10 LE note that are different from the 1 LE note and the 5 LE note.

TEACHER DO: Explain the meanings of the markings on the front and back. Include the color and shape and any writing that is visible. Display all three notes, the 1 LE, 5 LE, and 10 LE together.

4. TEACHER SAY: We have learned that different notes have different values. Which of these notes has the greatest value? In other words, which note is worth the most? Give me a **Thumbs Up** if you think you know.



STUDENTS DO: Give a **Thumbs Up** if they know. Selected students identify the 10 LE note.

5. TEACHER SAY: The 10 LE is the greatest value note we have today. Which of these notes has the least value? In other words, which note is worth the least? Give me a **Thumbs Up** if you think you know.



STUDENTS DO: Give a **Thumbs Up** if they know. Selected students identify the 1 LE note.

TEACHER SAY: The 1 LE note is the note with the least value. The 5 LE is in the middle. Now you will work with your small group to sort the pounds you have into three piles – a pile of 1 LE notes, a pile of 5 LE notes, and a pile of 10 LE notes. Remember the markings on each note. When you are finished, double check your work.



STUDENTS DO: Work together to sort 1 LE, 5 LE, and 10 LE notes into three piles. Double check their work.

TEACHER DO: Walk around as students are working. Listen to their conversations and check their work. Offer assistance, as needed. Use an **Attention Getting Signal**. Have students return their money to the bags and bring the bags to you.



Share (5 minutes)

Directions

1. TEACHER SAY: You did a great job learning about the Egyptian pound today. We learned how to distinguish between 1 LE, 5 LE, and 10 LE. Later, you will learn about pound notes with even higher values. I wonder why we need different values of notes. What do you think? Why might we need notes worth one pound, five pounds, ten pounds, or twenty pounds? Turn to your **Shoulder Partner** and share your thinking.



STUDENTS DO: Share their thinking with their **Shoulder Partners**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking.

TEACHER DO: Take note of students' understanding of the purpose of money and why we might need pound notes of different value. Tell students they will be learning more about money in the next math lesson.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Identify the value of 1 LE and 5 LE notes.
- Apply understanding of the value of money to solve problems.

KEY VOCABULARY

- Pound

MATERIALS

- Calendar Math Area
- Number cards 1 to 10
- Poster from Multidisciplinary lesson
- One 5 EL note and five 1 EL notes

LESSON PREPARATION

Have the poster, prices, and items from the market used on Lessons 8 and 9 in Chapter 3 of Multidisciplinary Theme 3.



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. I will hold up a number card. We will stand and stomp the number of times on the card. For example, if I hold up a 3, you will stomp 3 times. Let's try.

TEACHER DO: Hold up number cards 1 to 10 in various order.



STUDENTS DO: Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very good stomping and counting. Give your **Shoulder Partner** a handshake and sit.



STUDENTS DO: Give **Shoulder Partner** a handshake and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, our math lesson will incorporate our Multidisciplinary lesson. In our Multidisciplinary lesson, you created a market and then went shopping. You played different roles: customer, cashier, clerk, stocker, and manager. I will use the **Calling Sticks** and ask people to explain one of the roles.

Note to the Teacher: If the Multidisciplinary comes after the Math lesson in the school day, adjust the conversation below to discuss and practice what will be happening in the Multidisciplinary lesson later in the day.

TEACHER DO: Pull **Calling Sticks** to select students.



STUDENTS DO: Selected students will explain the roles they played in the market activity.

TEACHER SAY: Today, you will all have the same role: customer. Even cashiers, clerks, stockers, and managers are customers when they are not working. They may shop at other stores. And everyone uses money to buy goods. I will be your cashier.

TEACHER DO: Display market and one 5 LE note.

TEACHER SAY: **Lean and Whisper** to your **Shoulder Partner** what this is.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partners**.

TEACHER SAY: This is a 5 LE note. It is worth five pounds.

2. TEACHER SAY: Pretend your mother gave you 5 LE to spend at the store. Tell her, “Thank you,” And put it in your pocket.



STUDENTS DO: Respond together, “Thank you.” Pretend to put the money in their pockets.

TEACHER SAY: You have one 5 LE note. The prices remain the same from the Multidisciplinary lesson: Healthy foods cost 2 LE, Clothing costs 3 LE, and Toys and Sports Equipment cost 4 LE.

TEACHER DO: Point to Desserts and Candies.

TEACHER SAY: Desserts and Candies cost 5 LE. Do you have enough money to buy Desserts and Candies? **Whisper** your answer into your hand.



STUDENTS DO: **Whisper** their answers into their hands.

TEACHER SAY: Desserts and Candies cost 5 LE. We learned that this note has a value of five pounds. Yes, we have the money we need to buy Desserts and Candies. **Lean and Whisper** to your **Shoulder Partner** what you would say to me, the cashier.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: Pretend to have some candies in your hand. Reach out to the cashier and say, “I would like to buy this please.”



STUDENTS DO: Pretend to take candy and hand it to teacher and say, “I would like to buy this please.”

TEACHER SAY: That will be 5 LE, please. Now reach in your pocket and pull out the 5 LE note your mother gave you this morning.



STUDENTS DO: Pretend to take out a 5 LE note from their pockets.

TEACHER SAY: Before you hand it to the cashier, check it to make sure it is a 5 LE note. **Popcorn** around and tell me things that we can find on a 5 LE note to know it is that note and not another value.



STUDENTS DO: **Popcorn** around characteristics on the 5 LE note.

TEACHER SAY: Now, pretend to hand the cashier 5 LE. What do you say?



STUDENTS DO: Pretend to hand 5 LE to teacher. Respond together: Thank you.

TEACHER SAY: I will write you a receipt.

TEACHER DO: Draw a receipt with the number 5 and 5 squares to represent value.

TEACHER SAY: These 5 squares I am writing on the board represent the 5 LE.

TEACHER DO: Draw 5 squares and then cross them all out.

TEACHER SAY: You spent 5 LE so I will cross them all out. Great job buying goods from the market. Raise your hand if you can tell me how much money you have left.



STUDENTS DO: Raise hands to volunteer. Selected students answer the question.

TEACHER SAY: You have no money left. You spent it all on Desserts and Candies. You are very nice children, so I am certain your mother will give you 5 LE in the morning. Lay your head down and pretend to sleep.



STUDENTS DO: Lay head down and pretend to sleep.

3. TEACHER SAY: Wake up. It is morning. You were very nice so your mother hands you a 5 LE note. Tell her, “Thank you,” and put it in your pocket.



STUDENTS DO: Respond together: Thank you. Pretend to put money in their pockets.

TEACHER SAY: You go back to the market. Toys and Sports Equipment cost 4 LE. Do you have enough money to buy Toys and Sports Equipment? **Whisper** your answer into your hand.



STUDENTS DO: **Whisper** their answers into their hands.

TEACHER SAY: Pretend to take your toy to the register. Hand it to the cashier and say, “I would like to buy this please.”



STUDENTS DO: Pretend to take a toy and hand it to teacher and say, “I would like to buy this please.”

TEACHER SAY: That will be 4 LE, please. Now reach in your pocket and pull out the 5 LE your mother gave you this morning.



STUDENTS DO: Pretend to take out a 5 LE note from their pockets.

TEACHER SAY: Before you hand it to the cashier, think about the things that are on a 5 LE note.

TEACHER DO: Give **Think Time**.

TEACHER SAY: If you are certain this is a 5 LE, give a **Thumbs Up**.



STUDENTS DO: Give a **Thumbs Up**.

Note to the Teacher: In this scenario students practice identifying money and showing good market behavior. This lesson helps students compare numbers and practice deciding if a number is greater than another. Students are introduced to the idea of making change, but at this age are not expected to fully understand the concept or to do subtraction independently.

TEACHER SAY: Wait. The toy costs 4 LE, but you have 5 LE. Can you buy the toy? Think for a moment. When you are ready to share your thinking, give me a **Thumbs Up**.



STUDENTS DO: Think quietly. Give a **Thumbs Up** when they are ready to share their thinking. Selected students share their thinking. Students should recognize that they have enough money to buy the toy. Some students may understand that they have more than enough.

TEACHER SAY: You are thinking so carefully. 5 is more than 4, so 5 LE is more than 4 LE. You do have enough money to buy the toy. Hand the cashier 5 LE. What do you say?



STUDENTS DO: Pretend to hand a 5 LE note to teacher. Respond together: Thank you.

TEACHER SAY: Watch as I write your receipt. I will write 5 and show 5 squares to represent the 5 LE.

TEACHER DO: Write the number 5. Draw 5 squares.

TEACHER SAY: You gave me, the cashier, 5 LE. The toy you bought is 4 LE. I will cross out 4 LE. Count with me: 1, 2, 3, 4.



STUDENTS DO: Count aloud to 4 with the teacher.

TEACHER DO: Cross out 4 of the 5 squares.

TEACHER SAY: You had 5 LE and spent 4 LE, 1 LE remains. 5 minus 4 equals 1. The cashier cannot just keep that 1 LE. I have to give the extra money back to the customer. This is called making change.

TEACHER DO: In the remaining time, continue with examples of clothing and healthy foods.

Note to the Teacher: For struggling students consider using five 1 LE notes instead of a 5 LE.



Share (5 minutes)

Directions

1. TEACHER SAY: Think about what we did in math today. Why do you need to know how to add and subtract in order to use money?

TEACHER DO: Give **Think Time**.

TEACHER SAY: Please turn to your **Shoulder Partner** and share your thinking.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give time for students to share. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partner**. I want to know your thoughts about why we need to be able to add and subtract when it comes to using money.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share. Take note of their current understanding of the relationship between adding and subtracting and earning and spending money.



STUDENTS DO: Share if called on or listen actively to friends.




KINDERGARTEN I

Mathematics

Chapter 4

Lessons 91–100

Lessons 91–100

COMPONENT	DESCRIPTION	TIME
 Calendar and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15-20 minutes
 Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25-30 minutes
 Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from classmates' perspectives.	5-10 minutes

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

COUNTING AND CARDINALITY

- Compare two numbers between 1 and 10 presented as written numerals.

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - Using objects or drawings to represent a problem.
 - Decomposing numbers into pairs in more than one way (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).
 - Finding the number of objects that make 10 when added to any number 1 through 9.
- Employ units of money until 10 Egyptian pounds in addition and subtraction problems.

NUMBERS AND OPERATIONS IN BASE TEN:

- Compose and decompose 10 using objects, drawings, and so on.

MEASUREMENT

- Recognize different units of money, including 1 Egyptian pound, 5 pounds, 10 pounds.
- Classify objects into given categories (for example length, weight, size, color) and sort categories by count.

LESSON	INSTRUCTIONAL FOCUS
91	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 10.• Sort and organize shapes.• Recognize different quantities of money, including 1 LE, 5 LE, and 10 LE.
92	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 20.• Compare and sort objects by weight.
93	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 30.• Compare and sort objects by length.
94	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 40.• Order numbers from least to greatest within 10.
95	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 50.• Order numbers from least to greatest within 10.• Compare two quantities between 1 and 6.
96	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 60.• Order numbers from least to greatest within 10.• Compare two numbers between 1 and 5.
97	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Count from 1 to 10.• Draw pictures to represent the quantity 70.• Compare two numbers between 1 and 5.

98

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 80.
- Order numbers from least to greatest within 10.
- Add and subtract within 5 using objects.
- Decompose 5.

99

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 90.
- Compare two numbers between 1 and 5.
- Write numbers 0 to 5.

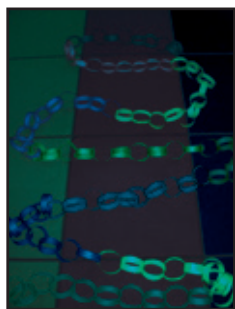
100

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 100.
- Create a physical model to illustrate the quantity 100.

Chapter Preparation

Students will be celebrating the 100th day in **Lesson 100**. Consider asking parents to help with the celebration by providing beads, pipe cleaners (chenille stems), and chunks of Styrofoam. Parents may also be able to cut 100 strips of paper to create the links for the 100-link chain. Each set of 10 links should be a different color.



- For **Lesson 91**:
 - Prepare 10 paper chains, each with 10 links. Each chain should be a different color.
 - * Each day a chain of 10 links will be connected to the previous day's, culminating in 100 links on the chain on **Lesson 100**.
 - * This activity replaces Movement Math in this chapter.
 - * Cut strips of construction paper (about 3 cm x 16 cm).
 - Create a large 10 x 10 grid to model coloring 10 boxes each day.
 - * Students' Math journal **Lesson 100** page has a corresponding 10 x 10 grid. Each day, starting on **Lesson 91**, you and the students will fill in 10 squares (you on your grid, them in their math journals), culminating in a graphic representation of 100 on **Lesson 100**.
 - Make 12 shape cut-outs of three triangles, three rectangles, three squares, and 3 circles. (See Shape Store Shapes and Prices Blackline Master.) You will tape the shapes to the board in random order.
 - Cut out a set of Shape Store Shapes and Prices for each small group of students.
 - Create the following price tags: 4 1 LE price tags, 4 5 LE price tags, 4 10 LE price tags.
- For **Lesson 92**:
 - Create a set of three Mystery Bags per each small group of 4 to 5 students. Fill each of the three bags per set with different amounts of small objects (such as rocks, crayons, or erasers) to vary the weight. Mark the outside of the bags with different colors or symbols so they can be identified without opening.
 - * Option: For a challenge give students more bags to weigh or make three bags the same weight.
 - Create a set of three Mystery Bags for the teacher. Mark the teacher set with a solid black shape: rectangle, circle, and triangle. Bag weights should be in this order to match the

lesson: rectangle: 1 (heaviest), circle: 2, triangle: 3 (lightest).

- Create a hanger balance for each small group of 4 to 5 students. Consider reusing the hanger balance and Weight Exploration recording sheet from **Lesson 55**. To make new ones you need a hanger, string, scissors, two cups, and a hole punch. Use the hole punch to make two holes near the top of the cups and on the opposite sides. Cut two pieces of string 30 cm long. It is important the strings are the same length. Loop and tie each string through the holes on one of the cups. Hang the cups in the notches on the opposite sides of the hanger. Hang the balance on a doorknob or hook.



- For **Lesson 93**:
 - Create notecards with each child's name using one notecard per letter. (See Notecards for Names Blackline Master.) For frequently-used letters, consider writing them in the squares before making copies of the template.
 - Create a large version of your name using sheets of paper to demonstrate in front of the class.
 - Create a chart to attach names stacked in order from shortest to longest.
- For **Lesson 94**:
 - Prepare for number relay race by making 1 large set of number cards.
 - * The race can be played by running, skipping, or hopping. Consider doing this activity in the hallway, the gymnasium, or outside.
 - Create a number train to display. Label the engine 0 and the remaining cards from 1 to 10. (See Train Template Blackline Master.)
 - Create a number train for each small group of three students. (See Student Train Template Blackline Master.)
- For **Lesson 95**:
 - You will need one die for every student.
- For **Lesson 96**:
 - Each student will need a set of 24 number cards that include 4 zeroes, 4 ones, 4 twos, 4 threes, 4 fours, and 4 fives. (See Greater Than Game Number Cards Blackline Master.)
- For **Lesson 98**:
 - Fold a piece of heavy paper (such as cardstock) so that it stands up like a tent. Each pair of students will need one paper tent.
 - Gather sets of five counters (one set per pair of students).
- For **Lesson 99**:
 - Gather 10 counters in an opaque cup.
 - Gather sets of five counters in an opaque cup (one set per pair of students).
 - Each student will need paper, sticky notes, or index cards.
- For **Lesson 100**:
 - Ask parents or volunteers to help with the 100th Day Celebration. If you are unable to find adult helpers, you may choose to modify the activities.
 - A goal for **Lesson 100** is that each student has a collection of 100 to bring home:
 - * Gather enough beads for each student to have 100. Cheerios, buttons, or macaroni may substitute for beads.
 - * Gather enough pipe cleaners (chenille stems) for each student to have one to three (depending on how big the beads are).
 - * Have pieces of Styrofoam (one per student) to help hold the pipe cleaners in place as students thread their beads.

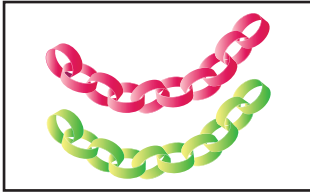
Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

- **Attention Getting Signal**
- **Calling Sticks**
- **Count Off**
- **Gallery Walk**
- **Hands Up, Pair Up**
- **Lean and Whisper**
- **Pair/Share**
- **Popcorn**
- **Shake It, Share It, High Five**
- **Shoulder Partner**
- **Think Time**
- **Thumbs Up**
- **Turn and Talk**
- **Wait Time**
- **Whisper**

Materials Used

Paper chain (example)



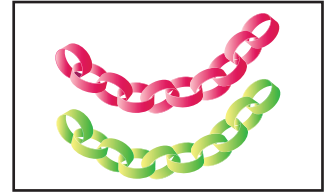
How to create hanger balance



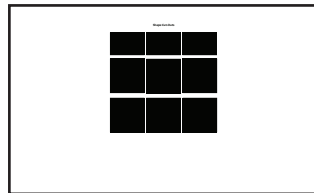
Calendar math area



Paper chain with 10 links



Shape cut outs



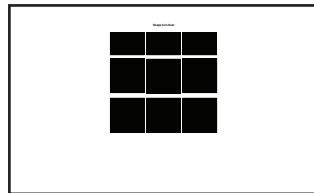
Large construction paper



Glue or tape



Large 10 x 10 grid



Math journal and pencil



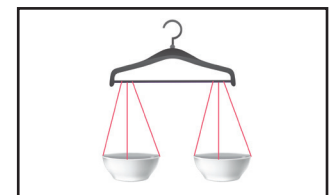
3 teacher mystery bags



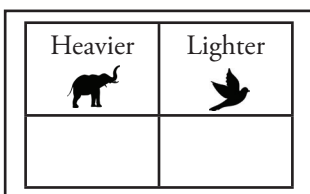
Student mystery bags (3 per group)



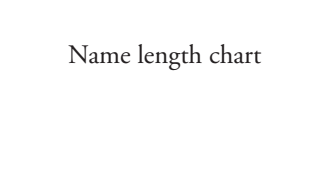
Hanger balance



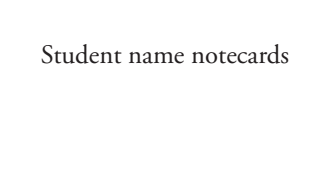
Weight exploration recording sheet



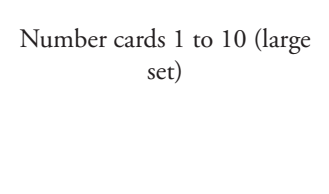
Name length chart



Student name notecards



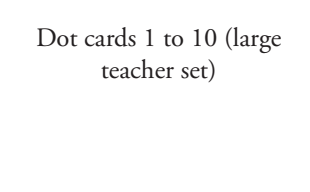
Number cards 1 to 10 (large set)



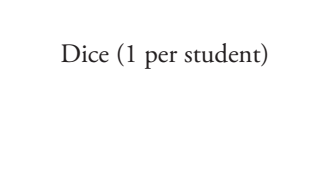
Number train



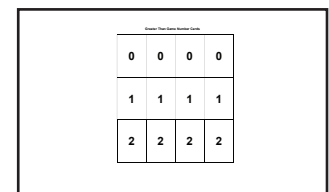
Dot cards 1 to 10 (large teacher set)



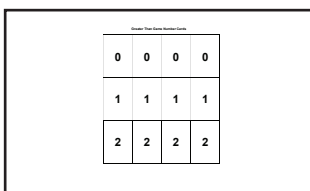
Dice (1 per student)



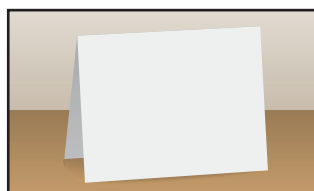
Greater Than Game number cards 0 to 5 (1 set per student)



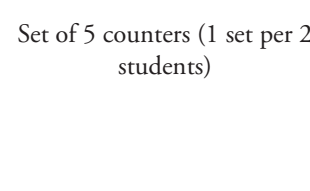
Deck of 48 Greater Than Game number cards (1 set per group of 3 students)



Folded paper tent



Set of 5 counters (1 set per 2 students)



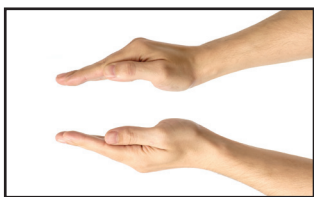
Extra paper (can be notecards, stick notes, dry-erase board)



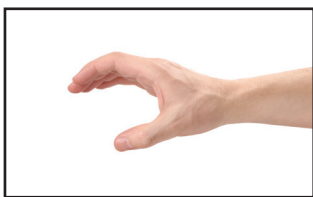
10 counters in an opaque cup
(for teacher)



Hands showing equal sign



Hand showing greater than



Hand showing less than



Beads



Pipe cleaners



Example of "high ten"

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Count from 1 to 10. • Draw pictures to represent the quantity 10. • Sort and organize shapes. • Recognize different quantities of money, including 1 LE, 5 LE, and 10 LE. 	<ul style="list-style-type: none"> • No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> • Calendar Math Area • Math journal and pencil • Paper chain with 10 links • Large 10 x 10 grid • Shape cut-outs for students (one set per small group) plus one set for the teacher • Large construction paper (one sheet per small group) • Glue • Tape
LESSON PREPARATION		
<ul style="list-style-type: none"> • Prepare paper chain with 10 links. • Create large 10 x 10 grid for 100th day celebration. (See Chapter Preparation.) • Cut out triangles, squares, circles, and rectangles ranging in size. You will need one set for demonstration and one set per small group of students. (See Shape Store Shapes and Prices Blackline Master.) • Prepare price tags for all shapes. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Instead of doing Movement Math today we will start preparing for our 100th day of learning. We will practice counting to 10 every day. I have a chain. Let's count the links on this chain together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: You are excellent at counting. Tomorrow we will count a new chain of links and add it to this chain.

TEACHER DO: Hang the chain where it will be visible for the next 10 lessons.

TEACHER SAY: Our goal is to have 100 links by our 100th lesson. 100 is a big number, but if we add 10 links each day to this chain, in 10 days we will have 100 links.

3. TEACHER DO: Display large 10 x 10 grid.

TEACHER SAY: Another way that we will build up to our 100 days of learning is to create a collection of 100. 100 is a big number, but just like we did with our chain, if we build our collection by 10 each day for 10 days, we will have 100. Count with me as I draw 10 stars.

TEACHER DO: Draw 10 stars in the first row or column. Either way will work, but be sure to continue as you started (in rows or in columns).

 **STUDENTS DO:** Count aloud with the teacher to 10.

TEACHER SAY: Decide what 10 things you would like to draw. Perhaps the shapes we have learned: triangle, circle, square, or rectangle. Perhaps 10 hearts or the first letter of your name written 10 times. Maybe you prefer to color in 10 squares with your favorite color.

 **TEACHER DO:** Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal. Draw whatever you would like that will fit in those 10 small squares. Do not fill in any other squares, just 10. See how I have done it here.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Walk around the classroom, observing students as they work. Offer help where needed.

TEACHER SAY: Keep your math journals with you. We will use them again in this lesson.

Note to the Teacher: This activity will replace Movement Math for the duration of this chapter. It is different from the routine they have become accustomed to, but at this point in the school year they should be able to make this adjustment. Students are not expected to be able to count to 100 on their own.




Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will create a Shape Store. First, we will talk about shapes and prices.

TEACHER DO: Display triangles on the board in random order.

TEACHER SAY: I have created three triangles. What do you notice about them?

 **STUDENTS DO:** Raise hand to share. Selected students share their ideas.

TEACHER SAY: The triangles are different sizes. First, I will act as the stocker and organize my items. Help me order them from small to large. Please, point to the small triangle.

 **STUDENTS DO:** Point to the small triangle.

TEACHER DO: Place the small triangle first.

TEACHER SAY: Point to the medium triangle.

 **STUDENTS DO:** Point to the medium triangle.

TEACHER DO: Place the medium triangle second.

TEACHER SAY: Point to the large triangle.

 **STUDENTS DO:** Point to the large triangle.

TEACHER DO: Place the large triangle third.

TEACHER SAY: I will now act as the store manager. I will create a price tag for each triangle I will sell at my Shape Store. Let's look at my price tags.

TEACHER DO: Display price tags labeled 1 LE, 5 LE, and 10 LE.

TEACHER SAY: I created three different price tags: 1 LE, 5 LE, and 10 LE. I have to decide on a price for each triangle. Should I make all of the triangles the same price? What do you think?

TEACHER DO: Give **Think Time**.



STUDENTS DO: Think about the prices for the triangles.

TEACHER SAY: Should the triangles be the same price? Why or why not? **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Turn and Talk** to **Shoulder Partners**.

TEACHER SAY: Give a **Thumbs Up** if you would like to share what you talked about with your **Shoulder Partner**.



STUDENTS DO: Give **Thumbs Up** to volunteer. Selected students share their thinking and reasoning.

TEACHER SAY: Most of us agree that the triangles should not be the same price because they are not the same size.

TEACHER DO: Hold up the 1 LE price tag.

TEACHER SAY: Point to the triangle that should cost 1 LE.



STUDENTS DO: Point to the small triangle.

TEACHER DO: Place 1 LE price tag under the small triangle. Hold up the 10 LE price tag.

TEACHER SAY: Point to the triangle that should cost 10 LE.



STUDENTS DO: Point to the large triangle.

TEACHER DO: Place 10 LE price tag under the large triangle. Hold up 5 LE price tag.

TEACHER SAY: Point to the triangle that should be 5 LE.



STUDENTS DO: Point to the medium triangle.

TEACHER DO: Place 5 LE price tag under the medium triangle.

TEACHER SAY: Why did we price the triangles the way we did? Would you sort and price your triangles the same way I did or would you do it differently? Why? I will use the **Calling Sticks** and ask three people to share.

TEACHER DO: Give **Wait Time**. Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share thinking and reasoning if called on to share or listen actively to classmates.

Note for the Teacher: If students understand the concept of organizing the shapes by size and assigning prices based on shape, allow them to begin working on their own Shape Stores. Otherwise, repeat the process of organizing shapes and assigning prices with squares, circles, and rectangles as needed. If students struggle sorting by size, hold the shapes against one another to compare. If students do not make the association between size and price, ask them about buying sweets at the store. Would they pay more for a smaller piece of candy? Is it wise to pay more for less?

2. TEACHER SAY: You will now have the opportunity to work together to create your own Shape Store. First, you and your friends will sort your shapes from smallest to largest. When you have finished doing that, give each shape a price. Then, raise your hands and I will check your work before I give you your glue. Once you have your glue, you will act as the stocker and glue your shapes onto your paper—your Shape Store. Remember to work together.

TEACHER DO: Hand out shape sets, price tags, and large sheets of construction paper.



STUDENTS DO: Organize and sort shapes. Assign prices. Raise hands to check work with the teacher.

TEACHER DO: Circulate and help students. Check their sorting and hand out glue when they are ready.



STUDENTS DO: Glue shapes and price tags onto Shape Store construction paper.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Now we will take a **Gallery Walk** and look at our friends' Shape Stores.



STUDENTS DO: Take a **Gallery Walk**.

TEACHER DO: Ask questions during **Gallery Walk**. Praise work. Check for understanding by asking a student to explain their work.

Note to the Teacher: If time permits, you may have students play store together, pretending to sell and buy shapes.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Count from 1 to 10. Draw pictures to represent the quantity 20. Compare and sort objects by weight. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Set of five counters in a cup (one set per student) Poster paper and marker
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare materials for 100th day. (See Chapter Preparation.) Create a hanger balance for each group of four students. (See Chapter Preparation.) Create three Mystery Bags for each small group of four students. (See Chapter Preparation.) Create three Mystery Bags for the teacher. Mark each with a solid black shape. (See Chapter Preparation.) Display Weight Exploration recording sheet (from Lesson 55). 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Today, we will continue to prepare for our 100th day of learning. I have another chain today that I will add to our chain from yesterday. Let's count the links on this new chain together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: Great job. Each day we will count a new chain of links and add them to this chain.

TEACHER DO: Add new chain of links to the chain from the previous day.

TEACHER SAY: What is our goal? How many links are we creating?



STUDENTS DO: Respond together: 100.

TEACHER SAY: If we add 10 links each day to this chain, in 10 days, we will have 100 links.

3. TEACHER DO: Display large 10 x 10 grid.

TEACHER SAY: We are coming up on our 100th day of school. Today, we will add 10 more pictures to our collection of 100. Count with me as I draw 10 circles in the next 10 squares.

TEACHER DO: Draw 10 circles and count aloud as you draw.



STUDENTS DO: Count aloud with the teacher to 10.

TEACHER SAY: Decide what 10 things you would like to draw today. You may decide to draw something different today: 10 flowers, stars, clouds, or fish. Perhaps you want to draw the same thing as yesterday.



TEACHER DO: Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal. Draw in the next 10 squares. Do not fill in any other squares, just 10.



STUDENTS DO: Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will compare the weights of objects. **Whisper** in your hand the words we use to describe weight.



STUDENTS DO: **Whisper** in hand: Light and heavy or lighter and heavier.

TEACHER SAY: I heard a lot of good ideas. We use the words light and heavy or lighter and heavier to describe weight. An elephant is heavy. Let's **Popcorn**: Tell me another animal that is heavy.



STUDENTS DO: **Popcorn** animals that are heavy. Answers may include whales, camels, hippos, rhinos, or other large, heavy animals.

TEACHER DO: Add any new words to the Weight Exploration Recording Sheet.

TEACHER SAY: A bird is light. Let's **Popcorn** again: Tell me another animal that is light.



STUDENTS DO: **Popcorn** animals that are light. Answers might include bugs, mice, frogs, cat, or other small, light animals.

TEACHER DO: Add any new words to the Weight Exploration Recording Sheet.

TEACHER SAY: When we compare two things, we use words like heavier and lighter to show we are comparing.

2. TEACHER DO: Hang a hanger balance so that it is visible to students.

TEACHER SAY: Give me a **Thumbs Up** if you remember when we used this tool.



STUDENTS DO: Give a **Thumbs Up** to indicate they remember.

TEACHER SAY: We used a hanger balance to compare the weights of two things. Show me with your hands what the cups will look like if they are the same weight.



STUDENTS DO: Hold up two hands at the same level.

TEACHER DO: If necessary, show students what the cups will look like when they balance.

TEACHER SAY: If the objects are different weights, the hanger will be unbalanced. Show me what that will look like.



STUDENTS DO: Hold up two hands at different levels.

TEACHER DO: Show students what the cups will look like when they do not balance.

TEACHER SAY: Point to the side that is lighter.



STUDENTS DO: Point to the hand lifted up.

TEACHER SAY: This object is lighter. Point to the side that is heavier.



STUDENTS DO: Point to the hand lowered down.

TEACHER SAY: The object that is heavier goes down because it weighs more than the lighter object. The last time we used a balance you did an excellent job of balancing each side. Today we will use the balance to compare weight.

3. TEACHER DO: Display your three Mystery Bags.

TEACHER SAY: I have created Mystery Bags. You do not know what is inside. Each bag is marked with a shape. I will point to the shape. You will say the name.

TEACHER DO: Point to each shape.



STUDENTS DO: As the teacher points, respond together with the name of the shape: rectangle, circle, and triangle.

TEACHER SAY: I will use the hanger balance to compare the weight of each bag. I can only compare two bags at a time, so I may have to weigh a bag again with a different bag to compare. You will help me put the bags in order from heaviest to lightest. Show me again what the balance will look like for the heavier bag.



STUDENTS DO: Hold up two hands, one hand higher than the other.

TEACHER SAY: I will start with the rectangle and circle bags. I will pull a **Calling Stick** for a student helper to place these on the balance.

TEACHER DO: Pull **Calling Stick**. Direct the student helper to place the rectangle and the circle bag on balance.

TEACHER SAY: Point to the heavier bag.



STUDENTS DO: Point to the rectangle bag.

TEACHER SAY: Point to the lighter bag.



STUDENTS DO: Point to the circle bag.

TEACHER SAY: As I learn about each bag I will order them here on this desk. So far, I will place the rectangle, the heaviest bag, first. I will place the circle, the lighter bag last.

TEACHER DO: Place the rectangle bag on a table in the first spot and the circle bag in the last spot, leaving a little space between them.

TEACHER SAY: Now, I will compare the triangle and rectangle bags. I will pull a **Calling Stick** for a student helper to place the triangle and rectangle bags on the balance.

TEACHER DO: Pull **Calling Stick**. Direct the student helper to place the triangle and rectangle bags on the balance.

TEACHER SAY: Point to the heavier bag.



STUDENTS DO: Point to the rectangle bag.

TEACHER SAY: Yes, the rectangle bag is heavier. Point to the lighter bag.



STUDENTS DO: Point to the triangle bag.

TEACHER SAY: Yes, the triangle bag is lighter. The rectangle bag is still the heaviest, so I will place it first. I am still not sure which bag is lightest, so I need to compare the triangle and circles bags.

TEACHER DO: Pull a **Calling Stick** and direct the student helper to place the triangle and the square bags on the balance.

TEACHER SAY: Point to the heavier bag.



STUDENTS DO: Point to the circle bag.

TEACHER SAY: Point to the lighter bag.



STUDENTS DO: Point to the triangle bag.

TEACHER SAY: We have more information. The circle bag was heavier than the triangle bag. Which bag is the heaviest?



STUDENTS DO: Respond together: Rectangle.

TEACHER SAY: Yes, the rectangle bag is the heaviest. I will place it first. Which bag is the lightest?



STUDENTS DO: Respond together: Triangle.

TEACHER SAY: Yes, the triangle bag is the lightest. I will place it last.

TEACHER DO: Place the triangle bag last.

TEACHER SAY: Where should we put the circle bag? Talk about it with your **Shoulder Partner**. Explain how you know.



STUDENTS DO: Talk to their **Shoulder Partners** about where to place the circle bag.

TEACHER SAY: Give me a **Thumbs Up** if you think you know.



STUDENTS DO: Give a **Thumbs Up** if they know where to place the circle bag. Selected students identify where the bag goes and explain their thinking.

TEACHER SAY: Yes, the circle bag was lighter than the rectangle bag and heavier than the triangle bag, so it will go in the middle.

TEACHER DO: Place the circle bag in the middle position.

TEACHER SAY: Thank you for helping me put my Mystery Bags in order. I have Mystery Bags for you to compare with your friends. You will have three bags: a red bag, a yellow bag, and a blue bag. Work with your small group to compare the weights of the bags and put them in order from heaviest to lightest.

Note to the Teacher: Students will have learned how to use the balances from watching your modeling. It will help with teamwork if you give students a role in their small group, such as balance holder, bag holder, organizer, and speaker.

TEACHER DO: Use **Count Off** or your preferred method to determine groups of four to five students each. Make sure each small group has a place to hang their hanger balances.

TEACHER SAY: When you are finished raise your hands and I will check your work.



STUDENTS DO: Work in small groups to compare the three bags. Organize them from heaviest to lightest. Raise hands when finished.

TEACHER DO: Circulate and offer help where needed. Check completed work and ask students to explain their results. After small groups are finished, use an **Attention Getting Signal** and clean up.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Great job working in small groups. Think about how you organized your bags. How did you know which bag was heaviest or lightest? How did you decide which bag goes in the middle?

TEACHER DO: Give **Think Time**.

TEACHER SAY: Please **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give time for students to **Pair/Share**. Then use the **Calling Sticks** to select students to share their thinking.



STUDENTS DO: Selected students share their thinking.

TEACHER SAY: You had three bags. What if I gave you a fourth bag? What would you do? How would you decide where to place it? **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give time for students to **Pair/Share**. Then use the **Calling Sticks** to select students to share their thinking.



STUDENTS DO: Selected students share their thinking.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 30.
- Compare and sort objects by length.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Paper chain with 10 links (different color from **Lesson 92**)
- Large 10 x 10 grid
- Large data recording sheet from **Lesson 54**
- Name Length chart
- Tape
- Student name notecards

LESSON PREPARATION

- Prepare materials for 100th day. (See Chapter Preparation.)
- Create notecards with the letters of each child's name (plus a large set with your name). (See Chapter Preparation.)
- Create chart to display names by length. (See Chapter Preparation.)
- Display large data recording sheet from **Lesson 54**.



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Today, we will continue to prepare for our 100th day of school when we will celebrate 100 days of learning. I have another chain today that we will add to our chain. Let's count the links on this chain together.

TEACHER DO: Hold up the new paper chain.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: Nice counting. Each day we will add to this chain. How many links will we have when we are done?



STUDENTS DO: Respond together: 100.

TEACHER SAY: Our goal is to have 100 links by our 100th lesson. If we add 10 links each day to this chain, in 10 days we will have 100 links.

TEACHER DO: Add 10 paper links to the chain. Display the large 10 x 10 grid.

TEACHER SAY: We will continue to build up to our celebration of 100 days of learning by adding 10 more to our collection of 100 in our math journals. If you color 10 squares each day for 10 days, how many will you have?



STUDENTS DO: Respond together: 100.

TEACHER SAY: Count with me as I draw 10 more _____ (choice of symbol) next to the 10 stars and 10 circles I drew already.

TEACHER DO: Draw 10 objects of your choice and count aloud.

 **STUDENTS DO:** Count aloud with the teacher to 10.

TEACHER SAY: Decide what 10 things you would like to draw today.

 **TEACHER DO:** Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal. Draw something in 10 small squares. Do not fill in any other squares, just 10.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will compare the lengths of items. **Whisper** in your hand the words we use to describe length.

 **STUDENTS DO:** **Whisper** in hand: Long and short or longer and shorter.

TEACHER SAY: We use words like long and short and longer and shorter to describe objects.

TEACHER DO: Display large data recording sheet from Lesson 54.


TEACHER SAY: Previously, in a different lesson I gave you and your group a piece of yarn. You and a partner went around comparing the length of your piece of yarn to other objects. We recorded our data on this chart.

TEACHER DO: Display large data recording sheet.


TEACHER SAY: Think of long and short things that are not on this chart.

TEACHER DO: Give **Think Time**.

TEACHER SAY: The Nile River is very long. **Popcorn** around and tell me something you know that is long.

 **STUDENTS DO:** **Popcorn** things that are long. Answers might include roads, truck, table, bus, bridges, cranes, limo, or whale.


TEACHER SAY: A pencil is short. Let's **Popcorn** again: Tell me things that are short.

 **STUDENTS DO:** **Popcorn** short objects. Answers might include crayon, stick, hair, or jump rope.

TEACHER SAY: Sometimes we hold items next to each other to compare them. Other times we measure length by counting. Today we will measure our names. I will use my name to show you.

TEACHER DO: Display large teacher name letter notecards on board.

TEACHER SAY: I wrote each letter in my name on a notecard. Then I put my letters in the correct order. Let's count together the number of letters in my name.

 **STUDENTS DO:** Count letters aloud with the teacher.

TEACHER SAY: My name is _____ letters long. Think about your name compared to my name. Is it longer? Is it shorter? Maybe you are not sure. **Lean and Whisper** to your **Shoulder Partner** longer, shorter, the same, or I am not sure.



STUDENTS DO: Lean and Whisper to Shoulder Partners.

TEACHER SAY: Today, you will measure your name so that you can be certain. I have notecards for each of you. The notecards have the letters of your name. After I give you your notecards, put the letters in the correct order to spell your name, and then count the letters. Raise your hand when you are done and I will check your work. I have a lot of names to check, so while you are waiting for me to check, practice tracing your name and decorate your notecards.

TEACHER DO: Hand out notecards with letters. Help struggling students.



STUDENTS DO: Arrange notecards in order and count. Raise hand to have the teacher check their work. Practice tracing their letters and color the notecards while the teacher is checking work.

TEACHER SAY: Now that your letters are in the correct order, compare it to my name. My name is _____ letters long. Is your name longer, shorter, or the same? Lean and Whisper to your Shoulder Partner: longer, shorter, or same.



STUDENTS DO: Lean and Whisper to Shoulder Partners.

TEACHER SAY: If you think that your name is the same length as mine, give me a Thumbs Up please.



STUDENTS DO: Give a Thumbs Up if their name is the same.

TEACHER SAY: If you think that your name is longer than mine, raise your hand please.



STUDENTS DO: Raise hands if their name is longer.

TEACHER SAY: If you think that your name is shorter than mine, pat your head please.



STUDENTS DO: Pat heads if their name is shorter.

TEACHER DO: Display Name Length chart.

TEACHER SAY: You did a very nice job comparing your names. Now we will put all our names on this chart in order from shortest to longest. If you think you have the shortest name, hold up your name so we can compare.



STUDENTS DO: If they have the shortest name, hold up their name.

TEACHER DO: Continue putting up names in order from shortest to longest. If students have the same length, put them in alphabetical order.



Share (5-10 minutes)

Directions

TEACHER SAY: Now we will **Shake It, Share It, High Five**. You move around the classroom until I say stop. Then partner with a nearby student. Partners shake hands and pick two names to compare. Talk about which name is shorter and which name is longer. High five your partner before moving around to find a new partner.



STUDENTS DO: Move around the classroom until the teacher says stop. Partner with a nearby student. Shake hands, compare names, then high five and find a new partner.

TEACHER DO: Give students ample time to **Shake It, Share It, High Five**, then use an **Attention Getting Signal** and instruct students to return to their seats.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to share what they did during **Shake It, Share It, High Five**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Count from 1 to 10. Draw pictures to represent the quantity 40. Order numbers from least to greatest within 10. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Paper chain with 10 links (different color from Lesson 93) Large 10 x 10 grid Number cards 1 to 10 (one large set for the class to share) Large teacher set of dot cards 1 to 10 Number train (one per group of three students and one demonstration number train for the teacher)
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare materials for 100th day. (See Chapter Preparation.) Prepare for number relay race. (See Chapter Preparation.) Create a number train to display and several number trains separated into three pieces. (See Chapter Preparation.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

TEACHER SAY: We are continuing to prepare for our celebration of 100 days of learning. Today, we will add the next set of 10 paper links to our chain.

TEACHER DO: Hold up the new chain to add on.

TEACHER SAY: Let's count together the links on this chain.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: Fantastic counting. Our goal is to have 100 links by our 100th day. If we add 10 links each day to this chain, in 10 days we will have 100.

TEACHER DO: Add the 10 paper links to the chain. Display large 10 x 10 grid.

TEACHER SAY: We will also prepare for our celebration of 100 days by adding 10 more to our collection of 100. If we draw or color 10 items each day for 10 days, how many will you have?



STUDENTS DO: Respond together: 100.

TEACHER SAY: Right. Count with me as I add 10 more.

TEACHER DO: Draw 10 objects of your choice and count aloud as you draw.




STUDENTS DO: Count aloud with the teacher to 10.



TEACHER DO: Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares. Do not fill in any other squares.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)

Directions

Note to the Teacher: Students will play an active matching game in this lesson. The game will help them practice recall under pressure. To make this activity work in your classroom, students may walk, run, or skip. The students watching their peers must be coached to sit until it is their turn and to quickly sit after they race.

1. TEACHER SAY: Today, we will have a number relay race. I will place the dot cards in order as our finish line. You will race to the finish line with a number card and match it to a dot card. Then you will return to your group and touch your friend's hand. Then, they will race to match their number card.


TEACHER DO: Arrange dot cards 1 through 10 in order on one side of the room.

TEACHER SAY: You will start with number 1 and you must go in order. I will demonstrate in slow motion. Slow motion means that I will walk. Give me a **Thumbs Up** if you understand.

 **STUDENTS DO:** Give a **Thumbs Up** to show they understand.

TEACHER SAY: I will pick a student helper to be 1. They will go to the finish line in slow motion. They will place the 1 number card on the corresponding 1 dot card, then walk back and touch my hand because I am holding the number 2. I will go to the finish line with my number 2 card and place it on the corresponding 2 dot card. Your job is to observe. Watch us.


TEACHER DO: Select a student helper and give them the 1 number card. Direct them to the starting line.

 **STUDENTS DO:** Student helper walks from the starting line to the finish line, places the 1 number card on the corresponding 1 dot card, then walks back and touches the teacher's hand, while the class observes.


TEACHER DO: Walk from the starting line to the finish line, place the number 2 card on the corresponding 2 dot card, then walk back.

TEACHER SAY: Now we are primed to start our number relay race. We will race safely but walk as fast as we can. Remember that we will go in order from 1 to 10. I will use **Calling Sticks** to choose the first 10 students.

TEACHER DO: Use **Calling Sticks** to choose the first 10 students. Hand each student a number card. You may either pass them out in order or have students find their correct order.

 **STUDENTS DO:** Line up in order at the starting line. Other students wait their turn and observe.

TEACHER SAY: Ready, set, go.

 **STUDENTS DO:** Run the relay race. Students wait their turn, watch, and cheer on their friends.

TEACHER DO: Officiate the relay race. Make sure students place number cards on the correct dot cards. Track the time of each group of students. Continue until all students have had a turn to race.

TEACHER SAY: Give each other a cheer. Say, “Great race,” then turn to your **Shoulder Partner**, give them a handshake, and have a seat.



STUDENTS DO: Give a cheer, say, “Great race,” give **Shoulder Partners** a handshake, then sit.

2. TEACHER SAY: You did an excellent job with the number relay race. We will use that knowledge to work together to construct a 10-car number train.

TEACHER DO: Display front of number train, numbers 0 to 4.

TEACHER SAY: I created a number train. Let’s count the numbers on my train. The engine is 0 and when we are counting we do not usually say 0, but we know that it is there.



STUDENTS DO: Count aloud with the teacher: 1, 2, 3, 4.

TEACHER SAY: Oh no. I am missing the end of my train. What numbers am I missing on my 10-car train?

TEACHER DO: Give **Think Time**.

TEACHER SAY: **Whisper** in your hand the numbers I need to make a 10-car train.



STUDENTS DO: **Whisper** in hand: 5, 6, 7, 8, 9, 10.

TEACHER SAY: Tell me what number cars am I missing.



STUDENTS DO: Respond together: 5, 6, 7, 8, 9, 10.

TEACHER SAY: Yes, I am missing number cars 5, 6, 7, 8, 9, 10.

TEACHER DO: Display number cars 5, 6, 7, 8, 9, 10.

TEACHER SAY: Now I can connect my train cars and have a 10-car train.

TEACHER DO: Connect train.

3. TEACHER SAY: You will work with two other friends to create a 10-car number train. I will give you a piece of your train, your partners will have the other pieces. You may have the front of the train, or the middle, or the back. The three of you have to find each other and put your train in order.

TEACHER DO: Hand out train cars segments randomly. Each student should receive one segment. Make sure all students are able to form a complete train with two other students (or you).

TEACHER SAY: Look at your numbers. Think of what cars you need to complete your 10-car train.

TEACHER DO: Give **Think Time**.

TEACHER SAY: Now, you may move about the room and try to find your two partners.

Note to the Teacher: This activity is set up for students to figure out groups for themselves. Do not immediately help students find groups or tell them if they are right or wrong. Much learning happens in peer-to-peer interactions as they determine on their own whether they are correct or incorrect. If the wrong partners connect, it is a learning opportunity for students to figure out how to resolve the error.



STUDENTS DO: Look at given numbers and walk around looking for the other train cars to complete their trains.

TEACHER DO: Allow students time to look for a group. Interject with questions: “Are you sure you have the right numbers?” “How do you know?” Encourage students to count and explain their thinking. Once everyone has connected with a partner, use an **Attention Getting Signal**.



Share (5-10 minutes)

Directions

1. TEACHER SAY: You have connected with two partners. How do you know that you have a 10-car train? How do you know you found the right people?

TEACHER DO: Give **Think Time**.

TEACHER SAY: I will use the **Calling Sticks**. If I call on you, you and your partners come forward to present your train. If the train is correct, we will give you a **Thumbs Up**. If it is not, we will not give you a **Thumbs Up**.

TEACHER DO: Pull a **Calling Stick**. Allow student groups time to share. Let students check and correct their classmates' work.



STUDENTS DO: Share when called on to share or listen actively to classmates. Give a **Thumbs Up** for correct trains. Offer suggestions to help students who did not create trains correctly.

Note to the Teacher: If time permits, have students repeat the activity and try to build their number train again. To increase challenge, lengthen, or shorten the train cars segments. More assembled cars will mean fewer partners to find, making it easier; less length to each segment, or varying segments will mean more partners to connect with and make it harder. Consider having students create their own number trains to take home for practice.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Count from 1 to 10. • Draw pictures to represent the quantity 50. • Order numbers from least to greatest within 10. • Compare two quantities between 1 and 6. 	<ul style="list-style-type: none"> • Equal to • Greater than • Less than 	<ul style="list-style-type: none"> • Calendar Math Area • Math journal and pencil • Paper chain with 10 links (different color from Lesson 94) • Large 10 x 10 grid • Large teacher set of dot cards 1 to 10 • Number cards 1 to 10 (one large set for the class to share) • Die (one per student)
LESSON PREPARATION		
<ul style="list-style-type: none"> • Prepare materials for 100th day. (See Chapter Preparation.) • Prepare materials for number relay race. (See Chapter Preparation.) • Each student will need one die. 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Today, we will continue to put our paper chain together as we prepare for our celebration of being 100 days smarter in math. **Lean and Whisper** to your **Shoulder Partner** how many links you think are in the chain I am holding.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partners**.

TEACHER SAY: Right now, we have 40 links. Today we will add 10 more links. Help me count the links on the new chain.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: If we add 10 links each day to this chain, how many links will we have in 10 days?



STUDENTS DO: Respond together: 100.

TEACHER SAY: Let's add our new paper chain.

TEACHER DO: Add 10 links to the chain. Display the large 10 x 10 grid.

TEACHER SAY: We had 40 links. We added 10 more. Now we have 50 links. We are halfway to 100. I have drawn in 40 squares. Today, we will draw in 10 more. Then we will have 50 squares decorated and you will see that we are halfway to 100. Count with me as I add 10 more to my collection.

TEACHER DO: Draw 10 objects of your choice and count aloud.

 **STUDENTS DO:** Count aloud with the teacher to 10.

 **TEACHER DO:** Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares with your choice of picture or symbol.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)

Directions


1. TEACHER DO: Prepare number relay race. Arrange dot cards 1 to 10 in order on one side of the room.

TEACHER SAY: We will have another number relay race, just as we did yesterday. I placed the dot cards in order as our finish line. You will race to the finish line with a number card and match it to a dot card. Then you will come back and touch your friend's hand. Then, they will race to match their number card. What number will we start with?


 **STUDENTS DO:** Respond together: 1.

TEACHER SAY: You start with number 1. You must go in order. You must be safe, but quick.

TEACHER DO: Randomly hand out number cards to first 10 students.


 **STUDENTS DO:** Line up in order at the starting line. Other students wait their turn and observe.

TEACHER SAY: Ready, set, go.

 **STUDENTS DO:** Run relay race. Other students wait their turn, watch, and cheer on their friends.

TEACHER DO: Officiate the relay race. Time each team. Make sure students place their number cards on the correct dot cards. Continue until all students have had a turn to race.

TEACHER SAY: Give each other a cheer and say, "Great race." Then turn to your **Shoulder Partner**, give them a handshake, and have a seat.

 **STUDENTS DO:** Give a cheer and say, "Great race." Give **Shoulder Partner** a handshake and then sit.

2. TEACHER SAY: You know your numbers so well. Now, I will teach you how to play the Dice Game. You will play with your **Shoulder Partner**. You will each get a die.

TEACHER DO: Pick a student helper and give them a die.

TEACHER SAY: Both of you roll the dice and say your number aloud. The person with the greatest number wins. I will show you.

TEACHER DO: Roll die.

 **STUDENTS DO:** Roll die.

TEACHER SAY: Now I count the dots on my die and _____ (student's name) counts the dots on their die.

TEACHER DO: Count dots. Say the number aloud.

 **STUDENTS DO:** Count dots. Say the number aloud.

TEACHER SAY: _____ is greater than _____. Point to the person with the greatest number.

 **STUDENTS DO:** Point to the winner.

TEACHER SAY: _____ (Larger number) is greater than _____ (smaller number) so _____ (name) is the winner. Then we roll the dice and play again.

TEACHER DO: Roll die.

 **STUDENTS DO:** Roll die.

TEACHER SAY: Count the dots.


TEACHER DO: Count dots. Say number aloud.

 **STUDENTS DO:** Count dots. Say number aloud.

TEACHER SAY: _____ (Larger number) is greater than _____ (smaller number). Point to the winner.

 **STUDENTS DO:** Point to the winner.

TEACHER SAY: If you and your **Shoulder Partner** roll the same number, the winner is the person to say, "Equal" first. Who wins if you roll the same number?

 **STUDENTS DO:** Respond together: The first person to say equal.

TEACHER SAY: Please turn to your **Shoulder Partner**. Once you get the dice you may begin.

TEACHER DO: Hand out dice.


 **STUDENTS DO:** Play Dice Game.

TEACHER DO: Give students time to play Dice Game. Circulate and help where needed. Use an **Attention Getting Signal** and collect all dice.


Share (5-10 minutes)

Directions


1. TEACHER SAY: Nice work. You were playing very well with your **Shoulder Partners**. One time I saw a student roll a 3 and the opponent rolled a 2, so the 3 won. Another time she rolled a 3 but lost because her partner rolled a 5. How can you win and lose when rolling the same number? Give me a **Thumbs Up** if you think you have an idea.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Share responses or listen to classmates.

TEACHER SAY: I would like you to talk about your game with a new partner. Please **Hands Up, Pair Up**. What was the greatest number possible? What number was the least? Did you notice anything about the numbers as you were playing? Did you get quicker at comparing the numbers as you played?

 **STUDENTS DO:** Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. Pair Up.

 **STUDENTS DO:** Clap hands and stand together with a nearby friend. Any students with a hand still up will find each other and pair up. Talk about the Dice Game.

TEACHER DO: Give ample time for students to share. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to share what they talked about with their partner.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Count from 1 to 10. Draw pictures to represent the quantity 60. Order numbers from least to greatest within 10. Compare two numbers between 1 and 5. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Paper chain with 10 links (different color from Lesson 95) Large 10 x 10 grid Number cards 1 to 10 (one large set for the class to share) Large teacher set of dot cards 1 to 10 Greater Than Game number cards 0 to 5 (one set per student)
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare materials for 100th day. (See Chapter Preparation.) Prepare number relay race. (See Chapter Preparation.) Prepare decks of Greater Than Game number cards (1 set per student). (See Greater Than Game Number Card Blackline Master.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: We will continue to build our chain of 100 links to help us celebrate 100 days of learning. I have another chain today that I will add to our growing chain. **Lean and Whisper** to your **Shoulder Partner** how many links you think are in the chain I am holding.



STUDENTS DO: **Lean and Whisper** to **Shoulder Partner**.

TEACHER SAY: Let's count the links together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: If we add 10 links each day to this chain, how many links will we have all together in 10 days?



STUDENTS DO: Respond together: 100.

TEACHER SAY: We are getting close to having 100 links by our 100th math lesson.

TEACHER DO: Add 10 new paper links to chain. Display large 10 x 10 grid.

TEACHER SAY: We are also making a collection of 100 to celebrate 100 days of learning. Count with me as I add 10 more to my collection.


TEACHER DO: Draw 10 objects of your choice and count aloud.



STUDENTS DO: Count aloud with teacher to 10.

 **TEACHER DO:** Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)


Directions

1. TEACHER SAY: Today we will have another number relay race. You are trying to be faster than you were yesterday. This time, I will place the number cards at the finish line and you will receive dot cards. You will race to the finish line with a dot card and match it to a number card. Then you will go back and touch the next person's hand and they will race to match their dot card.


TEACHER DO: Arrange number cards 1 through 10 in order on one side of the room.

TEACHER SAY: Remember, we start at 1 and we go in order to 10. You must be safe, but quick.

TEACHER DO: Randomly hand out dot cards to the first group of racers.


 **STUDENTS DO:** Line up in order at the starting line. Other students wait their turn and observe.

TEACHER SAY: Ready, set, go.

 **STUDENTS DO:** Run relay race. Other students wait their turn, watch, and cheer on their friends.

TEACHER DO: Officiate the relay race. Time each team. Make sure students place dot cards on the correct number cards. Continue until all students have had a turn to race.


TEACHER SAY: Give each other a cheer and say, "We are getting fast at math." Then, turn to your **Shoulder Partner**, give them a high five, and have a seat.

 **STUDENTS DO:** Give a cheer, say, "We are getting fast at math," give **Shoulder Partner** a high five, and then sit.

2. TEACHER DO: Display a deck of 24 number cards.

TEACHER SAY: I have a new game to teach you. This game is called the Greater Than Game and you play it with a partner. I will use a **Calling Stick** to find a student helper to come to the front and be my helper.

TEACHER DO: Pull one **Calling Stick**.

 **STUDENTS DO:** Student helper comes to the front while the class observes.

TEACHER SAY: Each player will have a deck of number cards. We will shuffle our cards and mix them up so they are not in order. Then, we will place them with the numbers down so we cannot see them.

TEACHER DO: Demonstrate shuffling cards and placing them face down.

TEACHER SAY: We will pull cards from the top of the deck. From where will I pull cards?

 **STUDENTS DO:** Respond together: The top of the deck.

TEACHER SAY: I will take one card, turn it over, and lay it down so that we can see the number.

TEACHER DO: Lay one card down with the number facing up.

TEACHER SAY: Now, _____ (student's name) will do the same.



STUDENTS DO: Student helper will take one card from their deck, turn it over, and lay it down with the number facing up. Seated students observe.

TEACHER SAY: I have _____ (your card number) and _____ (student's name) has _____ (student's card number).

TEACHER DO: Show both cards to the class.

TEACHER SAY: Which number card is greater, _____ or _____?



STUDENTS DO: Respond together with the greatest number.

TEACHER SAY: The player who laid down the greater number wins both cards. Point to the winner.



STUDENTS DO: Point to the winner.

TEACHER SAY: The winner turns both cards over, then places them on the bottom of their deck. Where do both cards go?



STUDENTS DO: Respond together: On the bottom.

TEACHER SAY: We do the same thing again. I take a card from the top of my deck and turn it over so we can both see the number. My helper does the same thing.

TEACHER DO: Take one card, turn it over, and lay it down face up.



STUDENTS DO: Student helper takes one card from their deck, turns it over, and lays it down face up. All students observe.

TEACHER SAY: I have _____ and they have _____.

TEACHER DO: Show both cards to the class.

TEACHER SAY: Which number card is greater, _____ or _____?



STUDENTS DO: Respond together with the greatest number.

TEACHER SAY: The player who laid down the greater number wins both cards. Point to the winner.



STUDENTS DO: Point to the winner.

TEACHER SAY: The winner turns both cards over, then places them on the bottom of their deck. We play another round. If the number cards are the same, the winner is the player who says, "Equal" first. Keep playing until one player has won all of the cards or until we are out of time. I would like you to play with a new partner. Please, **Hands Up, Pair Up.**



STUDENTS DO: Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. Pair Up.



STUDENTS DO: Clap hands and stand together with a nearby student. Anyone students with a hand still up find each other and pair up. Play the Greater Than Game.

TEACHER DO: Give time for students to play. Then use an **Attention Getting Signal**. Collect combined card decks. Each deck now has 48 cards when combined. The combined decks will be used in Lesson 97.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Great work. How did you know who the winner was? How do you know when a number is greater than or less than another number? Please **Turn and Talk** to your **Shoulder Partner**.



STUDENTS DO: **Shoulder Partners** share.

TEACHER DO: Give time for students to **Pair/Share**. Then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand to share what you talked about with your **Shoulder Partner**.

TEACHER DO: Call on students with hands raised. Allow students time to share.



STUDENTS DO: Raise hand to share or listen actively to classmates.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 70.
- Compare two numbers between 1 and 5.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Paper chain with 10 links (different color from **Lesson 96**)
- Large 10 x 10 grid
- Deck of 48 Greater Than Game number cards (one set per group of three students)

LESSON PREPARATION

- Prepare materials for 100th day. (See Chapter Preparation.)
- Reuse the decks of 48 Greater Than Game number cards. You will use the large number cards to demonstrate. (See Chapter Preparation.)



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Every day, we have been adding 10 new links to our paper link chain. We are building the chain to rejoice 100 days of learning math. Let's count the links together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: If we add 10 links each day for 10 days to this chain, how many links will we have in all?



STUDENTS DO: Respond together: 100.

TEACHER SAY: We will have 100 links on the 100th day.

TEACHER DO: Add 10 paper links to the chain. Display large 10 x 10 grid.

TEACHER SAY: We are also making a collection of 100 in our math journals to celebrate 100 days of learning. Count aloud with me as I add 10 more to my collection.

TEACHER DO: Draw 10 objects of your choice and count aloud as you draw.



STUDENTS DO: Count aloud with the teacher to 10.



TEACHER DO: Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares with your choice of letter or number.



STUDENTS DO: Turn to the page for **Lesson 100** and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



Learn (25-30 minutes)

Directions

Note to the Teacher: Today, students will work in groups of three. Each small group will use a deck of 48 cards. One student will be the card holder while the other two play the game. After the first round, students rotate roles and one of the players becomes the card holder. Students should play at least three rounds so each student has a chance to play twice and act as card holder once. You do not need to put the cards in any order. Just split the deck into two equal piles for students to begin the game.

1. TEACHER SAY: Today, I will teach you a new game called Slaps. We will use a deck of number cards. I will lay down two cards for you to see.

TEACHER DO: Lay down the 3 and 5 number cards.

TEACHER SAY: I laid down the 3 and 5. Show me on your fingers which number is greater.



STUDENTS DO: Show 5 fingers.

TEACHER SAY: Yes, 5 is greater than 3. I will slap the greater number. Which number will I slap?



STUDENTS DO: Respond together: 5.

TEACHER DO: Gently slap the 5 card.

TEACHER SAY: The player who slaps the greater card wins both cards.

TEACHER DO: Take both cards. Lay down two cards that are equal.

TEACHER SAY: If the cards are equal, the player that slaps both cards first wins.

TEACHER DO: Gently slap both cards.

TEACHER SAY: When you slap the greater number, you are doing so quickly and lightly so as to not hurt your friends if their hand gets in the way. I want you to lightly slap your leg like this to show me you understand.

TEACHER DO: Lightly slap leg.



STUDENTS DO: Lightly slap leg.

TEACHER SAY: Fantastic. I will pull **Calling Sticks** and ask two student helpers to play with me.

TEACHER DO: Pull two **Calling Sticks**.



STUDENTS DO: Student helpers come forward while the class observes.

TEACHER SAY: My student helpers will compete against each other. I will be the card holder. They will slap the greater number quickly and lightly. Show me a light slap on your leg.



STUDENTS DO: Lightly slap leg.


TEACHER SAY: Nice, let's play.

TEACHER DO: Lay down two cards.



STUDENTS DO: Slap the greater number while the class observes.


TEACHER SAY: The person who slaps the greater number first wins both cards. Point to the winner.

 **STUDENTS DO:** Point to the winner. Winner takes both cards.

TEACHER DO: Lay down two cards.

 **STUDENTS DO:** Slap the greater number while the class observes.

TEACHER SAY: The person who slaps the greater number first wins both cards. Point to the winner.

 **STUDENTS DO:** Point to the winner. Winner takes both cards.

TEACHER SAY: The game is over when I have used all the cards. The player with the most cards wins. Then one of them will become the card holder and I get to take their spot and play. After we play, the last person becomes the card holder and that last two people play. Everybody will be the card holder once and play twice. Are there any questions before we begin?

 **STUDENTS DO:** Ask questions, if necessary.

TEACHER DO: Answer any questions students have before handing out decks of cards. You may have predetermined small groups or use **Count Off** to determine student groups.

TEACHER DO: Hand out materials.

 **STUDENTS DO:** Play Slaps.

TEACHER DO: Walk around to observe as students play. Help where needed and ensure students are slapping the greater number lightly. Allow students to play three rounds, then use an **Attention Getting Signal** and collect card decks.



Share (5-10 minutes)

Directions


1. TEACHER SAY: Great work. Think of your favorite part of the game Slaps. What did you learn about numbers while playing? Please **Turn and Talk** to your **Shoulder Partners**.

 **STUDENTS DO:** **Shoulder Partners** share.

TEACHER DO: Give ample time for students to **Pair/Share**. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to share their thinking about the game Slaps.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to classmates.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Count from 1 to 10. • Draw pictures to represent the quantity 80. • Order numbers from least to greatest within 10. • Add and subtract within 5 using objects. • Decompose 5. 	<ul style="list-style-type: none"> • No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> • Calendar Math Area • Math journal and pencil • Paper chain with 10 links (different color from Lesson 97) • Large 10 x 10 grid • Number cards 1 to 10 (one large set for the class to share) • Large teacher set of dot cards 1 to 10 • Folded paper tent (one per pair of students) • Set of five counters (one set per pair of students)
LESSON PREPARATION		
<ul style="list-style-type: none"> • Prepare materials for 100th day. (See Chapter Preparation.) • Prepare number relay race. (See Chapter Preparation.) • Prepare sets of 5 counters. • Prepare 1 folded piece of heavy paper (one set student). (See Chapter Preparation.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Soon we will reach our 100th day of learning math. I have a chain of paper links to add to our 100 chain. Let's count the links together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: *Whisper* in your hand how many links we will have on the 100th day.



STUDENTS DO: *Whisper* in hand: 100.

TEACHER SAY: Wonderful. We will have 100 links by our 100th day of school.

TEACHER DO: Add 10 paper links to the chain. Display large 10 x 10 grid.

TEACHER SAY: Count with me as I add 10 more pictures to my grid.

TEACHER DO: Draw 10 objects of your choice and count aloud as you draw.



STUDENTS DO: Count aloud with the teacher to 10.



TEACHER DO: Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares with the drawing of your choice.



STUDENTS DO: Turn to the page for **Lesson 100** and fill in 10 squares.

TEACHER DO: Walk around and observe students as they work. Help where needed. Leave math journals for Share at the end of the lesson.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will have another number relay race. This time, I will mix up the cards. You may have a number card or you may have a dot card. You will race to the finish line with a card and match it. Then you will go back and touch your friend's hand and then they will race to match their card.

TEACHER DO: Arrange cards 1 through 10 in order on one side of the room, mixing number cards and dot cards.

TEACHER SAY: You start with number 1 and go in order. You must be safe, but quick.

TEACHER DO: Randomly hand out mixture of dot and number cards.



STUDENTS DO: Line up in order at the starting line. Other students wait their turn and observe.

TEACHER SAY: Ready, set, go.



STUDENTS DO: Run relay race. Other students wait their turn, watch, and cheer on their friends.

TEACHER DO: Officiate the relay race. Time each team. Make sure students match their cards correctly. Continue until all students have had a chance to race.

TEACHER SAY: Give each other a cheer and say, "We are getting so good at math." Then, turn to your **Shoulder Partner**, give them a high five, and have a seat.



STUDENTS DO: Give a cheer and say, "We are getting so good at math." Then, give **Shoulder Partner** a high five, and sit.

2. TEACHER SAY: Well done. Today, we will play the Cave Game, which is similar to the Cup Game. To start, 5 counters are visible.

TEACHER DO: Show 5 counters.

TEACHER SAY: These counters are 5 bears that live near a cave. You have to use your imagination and pretend they are bears. Say, "Hi bears."



STUDENTS DO: Respond together: Hi bears.

TEACHER DO: Display folded paper tent.

TEACHER SAY: Sometimes the bears forage for food and sometimes they sleep in their cave. This is the cozy cave the 5 bears sleep in. How many bears sleep in this cave?



STUDENTS DO: Respond together: 5.

TEACHER SAY: We will act out the game. You will pretend to be Player 1. Player 1 closes their eyes. Player 2 hides some bears in the cave.

TEACHER DO: Put 2 bears in the cave.

TEACHER SAY: Player 2 tells Player 1 to open their eyes. Open your eyes.

 **STUDENTS DO:** Open their eyes.

TEACHER SAY: Player 2 points to the bears outside of the cave and asks, “How many bears are outside the cave?” Player 1 counts the bears. You are practicing being Player 1, so count the bears aloud with me.

 **STUDENTS DO:** Count aloud to 3 with the teacher.

TEACHER SAY: Then Player 2 asks, “How many bears are inside the cave?” And Player 1 figures out how many bears must be inside the cave. Remember, how many bears did we say sleep in this cave?

 **STUDENTS DO:** Respond together: 5.

TEACHER SAY: We know that 5 bears sleep in the cave and 3 of those bears are outside. Think in your brain: How many bears are sleeping in the cave?

TEACHER DO: Give **Think Time**.

TEACHER SAY: Now, **Whisper** your answer in your hand.

 **STUDENTS DO: Whisper:** 2.

TEACHER SAY: Tell me: How many bears are sleeping inside the cave?

 **STUDENTS DO:** Respond together: 2.


TEACHER DO: Move the cave, revealing 2 bears.

TEACHER SAY: If you thought in your brain that there were 2 bears inside the cave, give your brain a high five.

 **STUDENTS DO:** Pat heads.


TEACHER SAY: I will pull a **Calling Stick** and ask a student helper to play the next round with me.

TEACHER DO: Pull a **Calling Stick**.

 **STUDENTS DO:** Selected student goes to the front of the room.

TEACHER SAY: You can be the bear handler first. I will close my eyes and you will put some bears in the cave. Tell me when I can open my eyes.

TEACHER DO: Close eyes.

 **STUDENTS DO:** Student helper puts some bears in the cave while the class observes. Tell the teacher to open eyes.

TEACHER DO: Open eyes.

TEACHER SAY: What do you ask me?

 **STUDENTS DO:** Respond together: How many bears are outside the cave?

TEACHER SAY: Count the bears aloud with me, please.

 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: Then what do you ask?

 **STUDENTS DO:** Respond together: How many bears are inside the cave?

TEACHER DO: **Think Aloud** by modeling a thinking face.

TEACHER SAY: I know there are 5 bears that sleep in the cave. I can see _____ (number) outside right now. I will use my fingers to count up from _____ (number) to 5. There are _____ (number) bears sleeping in the cave.



STUDENTS DO: Student helper reveals the bears inside the cave.

TEACHER SAY: Please, thank our student helper.



STUDENTS DO: Thank student helper.

3. TEACHER SAY: Do you have any questions before you start to play with your **Shoulder Partners**?

TEACHER DO: Answer questions. Then hand out materials.



STUDENTS DO: Ask questions, then play the game with their **Shoulder Partners**.

TEACHER DO: Circulate around the room, observing students and helping where needed. Give students time to play, then use an **Attention Getting Signal**. Collect materials.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Awesome work. Now you will draw a cave in your math journal on the page for Lesson 98. Draw 3 bears inside the cave.



STUDENTS DO: Open math journal to the page for **Lesson 98**. Draw a cave with 3 bears inside.

TEACHER SAY: I want you to talk with your **Shoulder Partner** to figure out how many bears are outside of the cave. We played the cave game and guessed how many bears were sleeping in the cave. Now we know how many are inside the cave. Is there a way to figure out how many bears are outside the cave? Remember, there are 5 bears altogether.



STUDENTS DO: Talk with their **Shoulder Partners**.

TEACHER DO: Give students time to talk with **Shoulder Partners**. Then use an **Attention Getting Signal**.

TEACHER SAY: Now I would like you to draw the bears that are outside of the cave. There are 5 all together and 3 are inside the cave. How many are outside? Draw them now and then I will use the **Calling Sticks** to have people share.



STUDENTS DO: Draw 2 bears outside the cave.

TEACHER DO: Pull **Calling Sticks**. Allow students time to share. Encourage them to explain their thinking.



STUDENTS DO: Share if called on to share or listen actively to classmates.

TEACHER SAY: Well done.

TEACHER DO: Collect journals.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> • Participate in Calendar Math activities. • Count from 1 to 10. • Draw pictures to represent the quantity 90. • Compare two numbers between 1 and 5. • Write numbers 0 to 5. 	<ul style="list-style-type: none"> • Equal to • Greater than • Less than 	<ul style="list-style-type: none"> • Calendar Math Area • Math journal and pencil • Paper chain with 10 links (different color from Lesson 98) • Large 10 x 10 grid • Number cards 1 to 10 (one large set for the class to share) • Large teacher set of dot cards 1 to 10 • Paper (note pad, sticky notes, notecards, small pieces of paper, dry erase board) • 10 counters in an opaque cup (for the teacher) • Sets of five counters in an opaque cup (one set per pair of students)
LESSON PREPARATION		
<ul style="list-style-type: none"> • Prepare materials for 100th day. (See Chapter Preparation.) • Prepare number relay race. (See Chapter Preparation.) • Collect 10 counters and an opaque cup for teacher use. • Gather sets of 5 counters in an opaque cup (one per pair of students). (See Chapter Preparation.) 		



Calendar and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: Tomorrow we will be 100 days smarter than we were at the beginning of the school year. I have a chain of 10 links to add to our 100 chain. Let's count the links together.



STUDENTS DO: Count aloud to 10 with the teacher.

TEACHER SAY: Lean and Whisper to your Shoulder Partner how many links we will have on the 100th day?



STUDENTS DO: Lean and Whisper to Shoulder Partner: 100.

TEACHER SAY: Yes, in our next math lesson we will add our last 10 links celebrate our 100th day of math education.

TEACHER DO: Add 10 paper links to the chain. Display large 10 x 10 grid.

TEACHER SAY: Count with me as I add 10 more drawings to my grid.

TEACHER DO: Draw 10 objects of your choice and count aloud as you draw.




STUDENTS DO: Count aloud with the teacher to 10.



TEACHER DO: Hand out math journals.

TEACHER SAY: Turn to the page for Lesson 100 in your math journal and fill in 10 squares. Tomorrow we will fill in the last 10 to make 100.

 **STUDENTS DO:** Turn to the page for Lesson 100 and fill in 10 squares.

TEACHER DO: Help where needed. Collect math journals.



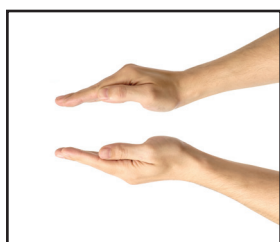
Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will play a game to compare numbers. Some numbers are the same and we call them equal.

TEACHER DO: Display 6 number card and 6 dot card.

TEACHER SAY: The 6 number card is equal to the 6 dot card. Make your hands like this to show equal.



TEACHER DO: Show equal sign with hands.

 **STUDENTS DO:** Make equal sign with hands.

TEACHER SAY: When numbers are different we will use a different symbol.

TEACHER DO: Display 3 number card.

TEACHER SAY: Point to the smaller number.

 **STUDENTS DO:** Point to the 3 number card.

TEACHER SAY: Make this sign with your hands to show 3 is less than 6.

TEACHER DO: Make less than symbol with right hand so that students will mirror with their left.

 **STUDENTS DO:** Mirror teacher's less than symbol.

TEACHER DO: Display the 8 number card.

TEACHER SAY: Point to the card that is greater.

 **STUDENTS DO:** Point to the 8 number card.

TEACHER SAY: 8 is greater than 6. Make this sign with your hand.

TEACHER DO: Make greater than symbol with left hand so students will mirror with their right.

 **STUDENTS DO:** Mirror teacher's greater than symbol.

TEACHER SAY: Fabulous. You are ready to play the Guessing Game.

TEACHER DO: Secretly place 6 counters in a cup. Show the cup to the class. Shake it enough times for students to hear the objects inside.

TEACHER SAY: I will pull Calling Sticks and you will guess how many counters are in the cup.

TEACHER DO: Pull four Calling Sticks. Let students guess how many counters are in the cup. Write the guesses on the board.

 **STUDENTS DO:** Guess if called on to guess or listen actively to classmates.

TEACHER SAY: Now, I will reveal the counters in the cup and you will help me count them.

TEACHER DO: Empty the contents of the cup and count aloud to 6.



STUDENTS DO: Count aloud to 6 with the teacher.

TEACHER SAY: We counted 6 counters in the cup. I will write that number on the board.

TEACHER DO: Write the number 6 on the board.

TEACHER SAY: Now let's compare our guesses to the objects in the cup. Use the hand symbols I taught you.

TEACHER DO: Show each hand symbol again. Point to the first number guessed.

TEACHER SAY: Show me with a hand symbol: is _____ (first guess) less than, greater than, or equal to 6?



STUDENTS DO: Show hand symbol to compare their guesses to the number of objects in the cup.

TEACHER DO: Repeat with all guesses to give students practice using the hand symbols.

2. TEACHER SAY: Now, you will have time to play with a partner. I will pull a **Calling Stick** for a student helper to be my partner.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Student helper goes to the front of the room to play the game with the teacher.

TEACHER SAY: In previous lessons you have played the Cup Game. We will use the cup and counters as before. This time you will not let the other player see what you have inside or outside the cup.

TEACHER DO: Put some counters in the cup. Shake the cup.

TEACHER SAY: You will write down your guess like in the Guessing Game we just played together.



STUDENTS DO: Write guess on the board.

TEACHER SAY: Then you will count what is inside the cup. Count with me.

TEACHER DO: Empty cup and count counters. Write the total on the board.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: Is your guess less than, greater than, or equal to?

TEACHER DO: Display the two numbers side by side.



STUDENTS DO: Show hand symbol.

TEACHER SAY: If your guess is equal to what was in the cup, you win. If your guess was less than or greater than, the cup holder wins. Point to the winner.



STUDENTS DO: Point to the winner.


TEACHER SAY: Then we switch roles. I am the guesser and the other person is the cup holder.



STUDENTS DO: Give the student helper a cup and counters. They put some counters in the cup while the class observes and the teacher closes eyes.

TEACHER DO: Open eyes. Write your guess on the board.

TEACHER SAY: I wrote down my guess. Now we will count what is inside the cup. Count with me.

 **STUDENTS DO:** Student helper empties the cup, counts the contents, and writes the total on the board as the class observes.

TEACHER SAY: Is my guess less than, greater than, or equal to? Show me with your hand symbols

 **STUDENTS DO:** Respond together using hand symbols.


TEACHER SAY: Point to the winner.

 **STUDENTS DO:** Point to the winner.


TEACHER SAY: Remember, the guesser wins if our numbers are equal. If the guesser's number is greater than or less than what is in the cup, the cup holder wins. Then switch roles and play again. Please thank our student helper.

 **STUDENTS DO:** Thank student helper.

TEACHER SAY: The player with the shortest hair will be the guesser first. The other player will have the cup and counters. We will **Hands Up, Pair Up** to find a partner.

 **STUDENTS DO:** Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. Pair Up.

 **STUDENTS DO:** Clap hands and stand together with a nearby student. Any students with a hand still up will find each other and pair up.

TEACHER SAY: Once you and your partner get your materials you may begin.

TEACHER DO: Hand out materials. Circulate and help where needed.

 **STUDENTS DO:** Play game.

TEACHER DO: Give students ample time to play with their partner and then use an **Attention Getting Signal**. Collect materials.

Share (5-10 minutes)

Directions


1. TEACHER SAY: Great work. Did the game go well? Was there a role that won more often? When did you win the most, as the guesser or as the cup holder? Please **Turn and Talk** to your **Shoulder Partner** about playing the game.

 **STUDENTS DO:** **Shoulder Partners** share.

TEACHER DO: Give ample time for students to **Pair/Share**. Then use an **Attention Getting Signal**.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to share what they talked about with their **Shoulder Partners**.

TEACHER DO: Pull three **Calling Sticks**. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to classmates.

Lesson 100

Overview

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Count from 1 to 10.
- Draw pictures to represent the quantity 100.
- Create a physical model to illustrate the quantity 100.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Paper chain with 10 links (different color from **Lesson 99**)
- Large 10 x 10 grid
- Beads
- Pipe cleaners (chenille stems)

LESSON PREPARATION

- Prepare materials for 100th Day Celebration. (See Chapter Preparation.)
- Gather beads (enough for each student to have 100 beads), pipe cleaners (one to three per student depending on the size of the beads), and chunks of Styrofoam (one per student). Put beads, pipe cleaners, and Styrofoam in the center of the table for students to share. (See Chapter Preparation.)



Calendar and Movement (15-20 minutes)

Directions

Note to the Teacher: Today is a celebration of the number 100. Movement Math is included and the chain and counting 10 objects are moved into the Learn section.

1. TEACHER DO: Complete Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in Calendar Math activities.

2. TEACHER SAY: It has finally arrived. Today we are 100 days smarter in mathematics. One hundred days better at mathematics. Think of everything we have learned, practiced, and shared in our first 100 days of school. We are amazing. Give your **Shoulder Partner** a handshake and tell them, “Congratulations on 100 days of hard work.”



STUDENTS DO: Give **Shoulder Partners** a handshake and say, “Congratulations on 100 days of hard work.”

TEACHER SAY: Everything we do today in math will involve 100.

TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let’s do Movement Math. Today is our 100th math lesson. We have not done Movement Math for many days. We have been learning for 100 days so we will do 100 movements to celebrate. We will do a movement and count to 10. I have 10 movements for us to do 10 times and that makes 100. Stand with me.




STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one. Count aloud to 10 with each movement.

TEACHER SAY:

- Clap your hands 10 times.
- Stomp your feet 10 times.
- Shake your arms above your head 10 times.
- Hop on one foot 10 times.
- Pat your head 10 times.
- Bend your knees 10 times.
- Reach for the sky 10 times.
- Touch your toes 10 times.
- Take 10 steps backward.
- Take 10 steps forward.

 **STUDENTS DO:** Follow each direction, doing each movement the correct number of times.

TEACHER SAY: Very nice job. We did 10 movements 10 times, so we have done a total of 100 movements on our 100th math lesson. Give yourselves a round of applause.

 **STUDENTS DO:** Give a round of applause.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display paper link chain.

TEACHER SAY: Today, we will complete our paper link chain. We have added 10 links each day for nine days. You helped me count to 10 each day. Right now we have 90 links in our chain. Let's add the final 10 links. Count them with me.


 **STUDENTS DO:** Count aloud to 10 with the teacher.

TEACHER DO: Add 10 paper links to the chain.

TEACHER SAY: This chain is 100 links long. Let's give ourselves 10 high tens. A high-ten is when you give a high five with both hands. If we do high tens 10 times, we will make a high hundred. Let's do a high hundred. Find your **Shoulder Partner**.

 **STUDENTS DO:** Give partner a high ten 10 times.

TEACHER SAY: Let's see if we can all stand in a circle and hold the 100-link chain together. Let's see how long it is.

 **STUDENTS DO:** Form a circle and hold the chain. Observe and discuss the length of the chain.

TEACHER SAY: Fantastic, you can return to your seats.

2. TEACHER DO: Display large 10 x 10 grid.

TEACHER SAY: Today is our 100th day and we will finish our collection of 100. We added 10 pictures every day for 10 days. Count with me as I add the last 10 to my collection.

TEACHER DO: Draw 10 objects of your choice and count aloud as you draw.

 **STUDENTS DO:** Count aloud with the teacher to 10.

TEACHER SAY: I will hand out your math journals. Add 10 pictures to the grid on the page for Lesson 100. Then we will share our collections.

 **TEACHER DO:** Hand out math journals.



 **STUDENTS DO:** Add the final 10 pictures to the grid on the page for **Lesson 100**.

TEACHER DO: Help where needed. Use **Attention Getting Signal**.


TEACHER SAY: Now how many things do you have in your collection in your math journal?

 **STUDENTS DO:** Respond together: 100.

TEACHER SAY: You have worked hard and now you have a collection of 100. Keep your math journals with you. Give yourself a pat on the back.

 **STUDENTS DO:** Pat their backs.

TEACHER SAY: You each have a collection of 100. Now we will carry our 100 collection and **Shake It, Share It, High Five**. You move around the classroom until I say stop, then you partner with a nearby student. Partners shake hands and look at one another's 100 collection, then high five before moving around again to find a new partner.

 **STUDENTS DO:** Move around the classroom until the teacher says stop. Partner with a nearby student. Shake hands, look at and share 100 collections, high five, and then find a new partner.

TEACHER DO: Give students time to **Shake It, Share It, High Five**, then use an **Attention-Getting Signal**.

3. TEACHER SAY: Today we are 100 days more brilliant. This is our 100th math lesson. We have learned so much. Think about the things we have done in math and what we have learned. What was your favorite math experience out of all 100 days? Please **Turn and Talk** to your **Shoulder Partner**.

 **STUDENTS DO:** **Shoulder Partners** share.

TEACHER DO: Give time for students to **Pair/Share**. If possible, prompt their memories with posters, projects, and displays. Then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand if you would like to talk about your favorite learning experience.

TEACHER DO: Call on students with hands raised. Allow students time to share.

 **STUDENTS DO:** Share if called on to share or listen actively to classmates.

4. TEACHER SAY: Now let's look at the next page in your math journal where Lesson 100 continues. Raise your hand and tell me what you notice about this page.

 **STUDENTS DO:** Raise hands to share.

TEACHER SAY: The grid on this page is the same as the grid where we made our 100 collection. It is exactly the same. **Whisper** in your hand how many squares are on this page.

 **STUDENTS DO:** **Whisper** 100 in hand.

TEACHER SAY: We will use this grid to help us make a 100 necklace. You will place a bead in each square. Once you have filled each square how many beads will you have on the grid?

 **STUDENT DO:** Respond together: 100.

TEACHER SAY: Any extra beads should be put back in the container. Keep the 100 beads on your grid. Be careful not to lose them. As soon as you have beads on your table, start placing them on your grid.

TEACHER DO: Place beads in the center of each table. Give each student a piece of Styrofoam and one to three pipe cleaners (depending on the size of the beads). Offer help where needed and check

students' work. As students are working, go to each table and demonstrate how to stick the pipe cleaner into the Styrofoam, take beads from the grid, and string each bead onto the pipe cleaner.



STUDENTS DO: Place a bead in each square of the 100-grid. When finished, stick pipe cleaner into Styrofoam and string 100 beads onto it.

Note to the Teacher: This activity requires patience and fine motor skills that your students are not expected to have mastered yet. Consider asking parents or volunteers to help with this activity.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Today we commemorated 100 days of learning. Think about some of the things we did to celebrate. What was your favorite? I will use the **Calling Sticks** and ask people to share what they liked the most out of all of our 100-day activities. If someone says the same thing you were thinking, pat your head so I know you were thinking of the same thing.

TEACHER DO: Pull **Calling Sticks**. Allow students time to share.



STUDENTS DO: Share if called on to share or listen actively to classmates and pat their head if they had the same idea.

KINDERGARTEN I




Mathematics

Chapter 5

Lessons 101-110

Overview

Lessons 101-110

COMPONENT	DESCRIPTION	TIME
 Calendar Math and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15-20 minutes
 Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25-30 minutes
 Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from classmates' perspectives.	5-10 minutes

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

COUNTING AND CARDINALITY

- Compare 2 numbers between 1 and 10 presented as written numerals.

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - Using objects or drawings to represent a problem.
 - Decomposing numbers into pairs in more than one way (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).
 - Finding the number of objects that make 10 when added to any number 1 through 9.

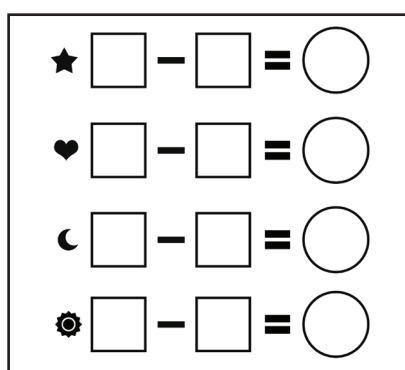
NUMBERS AND OPERATIONS IN BASE TEN:

- Compose and decompose 10 using objects, drawings, etc.

LESSON	INSTRUCTIONAL FOCUS
101	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Solve addition problems through Role Play. Apply strategies to add within 5.
102	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Solve addition problems through Role Play. Apply strategies to add within 5.
103	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 5. Apply strategies to add within 5.
104	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose quantities within 10. Apply strategies to add within 10.
105	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10.
106	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Demonstrate understanding of mathematical symbols: +, =.
107	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers.
108	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers.
109	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers. Represent addition in equations.
110	Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Solve subtraction problems through Role Play.

Chapter Preparation

- For **Lesson 102**:
 - Create a stick puppet of yourself and four friends or family members.
 - * Popsicle sticks, wooden skewers, or straws work well as sticks. Precut notecards work well for the human forms. Tape or glue the notecard onto the stick. Puppets illustrated on two sides are the most fun for kids to work with.
 - Obtain optional craft supplies to decorate the puppets, such as googly eyes, pipe cleaners, pom-poms, paint, felt, yarn, and magazine cut-outs.
 - Gather enough craft supplies for each student to make five puppets.
- For **Lesson 103**:
 - Create a set of 18 0 to 5 number cards (one set per pair of students) that includes the following:
 - * Six ten frames showing 0 to 5. (See page 1 of Ten Frames 0-10 – Student Blackline Master.)
 - * Six dot cards showing 0 to 5. (See page 1 of Dot Cards 0-10 – Student Blackline Master.)
 - * Six alternate dot cards showing 0 to 5. (See page 1 of Dot Cards 0-10 – Alternate Blackline Master.)
- For **Lesson 104**:
 - Create a set of numbers cards 0 to 10 (one set per pair of students). (See Number Cards 0-10 Blackline Master.)
 - * This deck is used again in Lessons 107 and 108.
- For **Lesson 105**:
 - Print out copies of the Paper Dice Blackline Master (each pair of students will need two 0-5 strips). Cut the squares into strips.
 - * Students will cut the squares apart to create paper dice.
 - Gather one cup or small paper bag for each pair of students. Students will draw the “dice” squares out of the cup or bag. Cut strips apart to create two sets squares (1-6) for each pair of students.
 - * Another option is to print out copies of the 6 Spinner Blackline Master (one spinner per pair of students) and give each pair of students a paperclip to use as the spinner. Students will spin twice to represent two dice.
 - Create a large poster that looks similar to math journal, **Lesson 105**.



- For **Lesson 109**:
 - Create poster showing large plus sign and equal sign.
 - Prepare large number cards (0 to 10).

Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

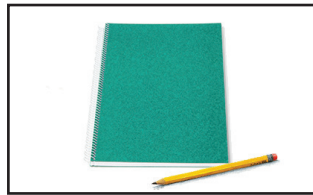
- **Attention Getting Signal**
- **Brainstorm**
- **Calling Sticks**
- **Gallery Walk**
- **Hands Up Pair Up**
- **I Do, We Do, You Do**
- **Lean and Whisper**
- **One Stay, One Stray**
- **Pair/Share**
- **Role Play**
- **Shoulder Partner**
- **Think Time**
- **Thumbs Up**
- **Turn and Talk**
- **Wait Time**
- **Whisper**

Materials Used

Calendar math area



Math journal and pencil



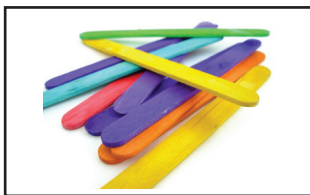
Ball



Five stick puppets (for teacher demonstration)



Five craft sticks per student



Notecards or index cards (three to five per student)



Scissors



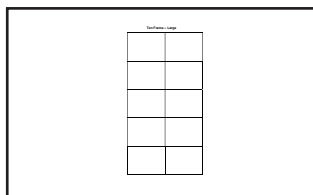
Glue or tape



Art supplies (pens, colored pencils, crayons, markers)



Ten frame



Teacher set of large dot cards

Sets of 0 to 5 number cards (one set of 18 cards per pair of students)

Number cards 0 to 10 (one set per pair of students)

Paper dice 0 to 5

Cup or small paper bag



OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Solve addition problems through **Role Play**.
- Apply strategies to add within 5.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Ball

LESSON PREPARATION

- Have a ball available for the Catch and Count game during Movement Math.



Calendar Math and Movement (15-20 minutes)

Directions

1. **TEACHER DO:** Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. **TEACHER DO:** Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today we will play Catch and Count. We will count to 10 and continue playing until everyone is standing. Make sure you have room.

TEACHER DO: Point to a student to stand. Toss the ball and count 1.



STUDENTS DO: Catch and count until 10. Repeat until everyone is standing.

TEACHER SAY: Great job, everyone. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. **TEACHER SAY:** Today we will **Role Play** addition stories. Have you ever been playing a game by yourself and then a friend joins you?

STUDENTS DO: Call out responses.

TEACHER SAY: Think of a time when this has happened to you. Raise a hand to share.



STUDENTS DO: Raise hands to volunteer. Selected students share their experiences.

TEACHER SAY: We are going to **Role Play** the story of one person playing and another person joining them. For us to **Role Play** this story, how many people will we need?



STUDENTS DO: Respond together: 2.

TEACHER SAY: I will use the **Calling Sticks** and ask two people to **Role Play**. One student will be playing. The other student will come and join them.

TEACHER DO: Pull two **Calling Sticks** and have student helpers **Role Play**.



STUDENTS DO: **Role Play** or observe classmates.

TEACHER SAY: Very nice. Thank our student helpers as they return to their seats.



STUDENTS DO: Thank student helpers as they sit.

TEACHER SAY: Let's try another story. There are 2 friends reading and 1 more friend joins them. How many children are reading now?



STUDENTS DO: Respond together: 3.

TEACHER SAY: I will use the **Calling Sticks** and ask three people to **Role Play**. Two students will be reading together. One student will come join them.

TEACHER DO: Pull three **Calling Sticks** and have student helpers **Role Play**.



STUDENTS DO: **Role Play** or observe classmates.

TEACHER SAY: Thank our student helpers as they return to their seats.



STUDENTS DO: Thank student helpers as they sit.

TEACHER SAY: Let's try another story. There are 3 friends playing football. I will use the **Calling Sticks** and ask three people to **Role Play**.

TEACHER DO: Pull three **Calling Sticks** and have student helpers **Role Play**.



STUDENTS DO: **Role Play** or observe classmates.

TEACHER SAY: Two more friends join them. I will use the **Calling Sticks** and ask two people to **Role Play**.

TEACHER DO: Pull two **Calling Sticks** and have student helpers **Role Play**.



STUDENTS DO: **Role Play** or observe classmates.

TEACHER SAY: How many children are playing football all together?



STUDENTS DO: Respond together: 5.

TEACHER SAY: Very nice. Thank our student helpers as they return to their seats.



STUDENTS DO: Thank student helpers as they sit.

TEACHER SAY: In the stories your friends acted out, they were adding people together. We started with people and we added more people. Now, you are going to **Role Play** some addition story problems together. Addition means you put things together and then count to see how many you have all together. Now, you are going to **Role Play** some addition problems with some friends. First, I will divide you into groups.

TEACHER DO: Divide students into groups of five.



STUDENTS DO: Move to stand with their group.

TEACHER SAY: I am going to tell you a story. Work together to **Role Play** the problem and figure out the answer. One day, 3 birds landed on a tree branch. Three people in your group should pretend to be birds landing on a tree branch.



STUDENTS DO: Three students in each group **Role Play** birds landing on a branch.

TEACHER SAY: Then, 2 more birds landed on the same branch. Two people should pretend to be birds and join the other three birds.



STUDENTS DO: Two students in each group **Role Play** birds landing on the same branch.

TEACHER SAY: I want to know how many birds are on the branch in all. Talk to your group and raise your hands when you know the answer.



STUDENTS DO: Talk to each other and figure out the answer. Raise hands when ready.

TEACHER SAY: How many birds are on the branch?



STUDENTS DO: Call out answer together.

TEACHER SAY: Good job. There are 5 birds on the branch. Let's try another one. I saw 4 cats were drinking water from a bowl. Four people in your group should pretend to be cats drinking water from a bowl.



STUDENTS DO: Four students in each group **Role Play** cats drinking water from a bowl.

TEACHER SAY: Then, 1 more cat joined the group and drank water from the same bowl. One person from your group should **Role Play** a cat drinking water from the bowl.



STUDENTS DO: One student in each group **Role Play** a cat drinking water from a bowl.

TEACHER SAY: I want to know how many cats were drinking water from the bowl. Talk to each other and figure out the answer. Raise your hands when you know the answer.



STUDENTS DO: Talk to each other and figure out the answer. Raise hands when ready.

TEACHER SAY: How many cats were drinking water from the bowl?



STUDENTS DO: Call out answer together.

TEACHER SAY: Wonderful. There were 5 cats drinking water from the bowl. We will try one more. This time you and your group figure out how to **Role Play** the story problem. This morning, I saw 2 clouds float across the sky.



STUDENTS DO: Two students in each group **Role Play** clouds.

TEACHER SAY: Then, I saw 3 more clouds float across the sky.



STUDENTS DO: Three more students in each group **Role Play** clouds.

TEACHER SAY: How many clouds did I see floating across the sky? Talk to each other and figure out the answer. Raise your hands when you are ready.



STUDENTS DO: Talk to each other and figure out the answer. Raise hands when ready.

TEACHER SAY: How many clouds were floating across the sky?



STUDENTS DO: Call out answer together.

TEACHER SAY: Very good. There were 5 clouds floating across the sky. Please return to your seats.



STUDENTS DO: Return to their seats.

TEACHER SAY: You did a wonderful job adding today. You **Role Played** addition with your friends and solved problems. We will try more problems tomorrow.



Share (5-10 minutes)

Directions

1. **TEACHER SAY:** Great work using your imagination to **Role Play**. Which **Role Play** was your favorite? Give me a **Thumbs Up** when you have an answer.



STUDENTS DO: Raise hands to volunteer. Selected students share their favorite problem to **Role Play**.



TEACHER SAY: I will hand out your math journals. When you get your journal, turn to the page for Lesson 101 and draw a picture of your favorite addition problem **Role Play**.

TEACHER DO: Hand out math journals.



STUDENTS DO: Open their journals to the page for **Lesson 101**. Draw their favorite addition problem **Role Play**.

2. **TEACHER SAY:** Now we will take a **Gallery Walk** and look at our friends' addition drawings.



STUDENTS DO: Take a **Gallery Walk**.

TEACHER DO: Ask questions during the **Gallery Walk**. Praise work. Check for understanding by asking a student to explain his/her drawing.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Solve addition problems through Role Play. Apply strategies to add within 5. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area 5 stick puppets (for the teacher demonstration) 5 sticks per student 3-5 notecards per student (enough for each student to make five puppets) Scissors, glue, or tape Art supplies (pens, colored pencils, crayons, markers)
LESSON PREPARATION		
<ul style="list-style-type: none"> Create five stick puppets to use as demonstration. (See Chapter Preparation for instructions.) Gather materials for each student to make five stick puppets of their own. (See Chapter Preparation for the Teacher.) 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Let's do Movement Math. Stand up and make sure you have space around you.



STUDENTS DO: Stand up.

TEACHER SAY: Let's count and clap from right to left. We will count to 10 three times.

TEACHER DO: Model clapping right to left while counting to 10. If you are facing the students, mirror what they are to do so they are counting accurately from right to left. Alternatively, stand with your back to the students so they can copy you. Repeat three times.



STUDENTS DO: Clap and count aloud with the teacher three times.

TEACHER SAY: Wonderful job counting and clapping. Give your **Shoulder Partner** a high five on the right and a high five on the left. Then, have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five on the right and a high five on the left, then sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Yesterday we acted out addition stories using **Role Play**. Raise your hand if you remember some of the addition stories from yesterday.



STUDENTS DO: Raise hands to volunteer. Selected students share their answers.

TEACHER SAY: Today we will act out addition using puppets. First, you will make a puppet of yourself.

TEACHER DO: Display your puppet of yourself.

TEACHER SAY: Then, we will make four puppets of our friends or family. I have made puppets of four friends. Say hello to my friends.

TEACHER DO: Display your other four puppets.



STUDENTS DO: Respond together: Hello.

TEACHER SAY: I have 1 puppet of myself and 4 more puppet friends join me. How many puppets do I have altogether?



STUDENTS DO: Respond together: 5.

TEACHER SAY: You will make five puppets in total: one of yourself and four of family or friends. You will then use them to act out addition stories. Please **Brainstorm** four people you can make a puppet of. Think quietly about four people you do a lot of activities with.



STUDENTS DO: **Brainstorm** four people to make puppets of.

TEACHER DO: Give **Think Time**.

TEACHER SAY: Raise your hand to share your ideas. Who will your puppets be?



STUDENTS DO: Raise hands to volunteer. Selected students share their ideas.

TEACHER SAY: I will give each of you five sticks. Write your name on each stick. Then, you will use art supplies to create and decorate your puppets. Do not forget, one puppet must be you.

How many family or friend puppets will you create?



STUDENTS DO: Respond together: 4.

TEACHER DO: Hand out five sticks per student. Have art supplies available.



STUDENTS DO: Create five stick puppets.

TEACHER DO: Assist students as needed. Students who are finished may begin **Role Playing** by themselves. Once all students are finished, use an **Attention Getting Signal**. Clean up art supplies.

*Note to the Teacher: The puppets will be reused in **Lesson 110**. Make sure the puppets are marked with students' names or initials. You may decide to spend more time focusing on art objectives with this lesson and adjust your schedule accordingly. If you have not used puppets in class, please review the rules and procedures, such as that puppets are expected to behave like students. This means no puppet fighting and puppets are quiet while the teacher is speaking.*

2. TEACHER SAY: Now, you will work with your **Shoulder Partner** and act out addition stories using your puppets. Let's begin. One day, you started dancing to your favorite song. Make the puppet that represents you dance to your favorite song.



STUDENTS DO: Make one puppet dance.

TEACHER SAY: Then, 4 of your friends joined you and started dancing, too.



STUDENTS DO: Make their other 4 puppets dance.

TEACHER SAY: How many people were dancing?



STUDENTS DO: Call out the answer together.

TEACHER SAY: Five people were dancing. Great job **Role Playing** this addition problem with your puppets.



Share (5-10 minutes)

Directions

1. TEACHER SAY: How does **Role Play** help us add? Think for a moment, then I will call on some of you.



STUDENTS DO: Think quietly about how **Role Play** helps them add.

TEACHER SAY: Raise your hands to share your ideas.



STUDENTS DO: Raise hands to volunteer. Selected students discuss how they think **Role Play** helps them add.

TEACHER DO: Listen to students' ideas to identify students who understand the relationship between **Role Play** and addition. Take note of misconceptions that may need to be corrected later.

TEACHER SAY: Thank you for sharing your ideas. We will continue to work on addition problems together. We will use our puppets again, too. For now, put them in your desks/I will collect and store them (choose an option that works for you).

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose 5. Apply strategies to add within 5. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Ten frame showing 5 Teacher set of large dot cards Math journal and pencil Sets of 0 to 5 number cards (one set of 18 cards per pair of students and one set for the teacher)
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a set of 0 to 5 number cards (one set of 18 cards per pair of students and one set for the students). (See Chapter Preparation for instructions.) 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Let's do Movement Math. Today we are going to practice counting while reaching up and down. We will stand, reach up and count, then reach down and count.

TEACHER DO: Model reaching up and down while counting to 10. Repeat three times.

TEACHER SAY: Everyone stand and count with me. We will count to 10 three times.



STUDENTS DO: Count aloud and reach up and down with the teacher three times.

TEACHER SAY: First-rate work. Give your **Shoulder Partner** a high five and a low five, then have a seat.



STUDENTS DO: Give **Shoulder Partner** high five and low five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Hold up five fingers.

TEACHER SAY: Show me this on your fingers. What number is this?



STUDENTS DO: Show five fingers. Respond together: 5.

TEACHER SAY: I showed you 5 with fingers on one hand. I will show you another way to show 5.

TEACHER DO: Write the number 5 on the board. Point to 5.

TEACHER SAY: What number is this?

 **STUDENTS DO:** Respond together: 5.

TEACHER DO: Display 5 on the ten frame.

TEACHER SAY: Lean and Whisper to your Shoulder Partner what number this is.


 **STUDENTS DO:** Lean and Whisper to Shoulder Partner: 5.

TEACHER SAY: Yes, this is another way to show 5. I wonder if there are other ways to show the number 5?

TEACHER DO: Give Think Time.

TEACHER SAY: Raise a hand if you would like to share another way to show 5.

TEACHER DO: Call on students with raised hands to share or come to the board and draw 5.

 **STUDENTS DO:** Raise hands to share or listen actively to classmates.

TEACHER DO: Hold up the 2 and 3 dot cards.

TEACHER SAY: Here I have 2 dots and 3 dots. Whisper in your hand the total number of dots.

 **STUDENTS DO:** Whisper in hand: 5.

TEACHER SAY: Yes, 2 and 3 makes 5 total. This is another way to show 5. Think of other pairs of numbers that we can add together to make 5. Pair/Share with your Shoulder Partner.

 **STUDENTS DO:** Pair/Share with Shoulder Partner.

2. TEACHER DO: While students are sharing, arrange your large dot cards so they are faceup in random order. Then use an Attention Getting Signal.

TEACHER SAY: We will practice making 5 with a game called Make Five. I will give you a deck of dot number cards with three kinds of cards: ten frames, dot cards, and picture dot cards. The picture dot cards have dots, but the dots do not match and they are not lined up as they are on our dot cards.

TEACHER DO: Hold up each type of card as you name them for students to see.


TEACHER SAY: You will lay all of the cards faceup just as I have. Then you and your Shoulder Partner will take turns finding two cards that make 5. I will pull a Calling Stick and ask a student helper to work with me.

TEACHER DO: Pull a Calling Stick.

TEACHER SAY: I will go first. I see a ten frame with 4 dots and here is 1 dot card. I know that 4 and 1 makes 5. I can count the dots to be sure. Count with me.

 **STUDENTS DO:** Count aloud to 5 with the teacher.

TEACHER SAY: Now my student helper takes a turn. They try to Make Five.

 **STUDENTS DO:** Helper takes two cards that equal 5 while the class observes.

TEACHER SAY: Let's count together to make sure that these two cards make 5.

 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: If we count them and the total is not 5, put both cards back and the first person takes a turn again.

TEACHER DO: Pick up any 3 and any 4 card.


TEACHER SAY: Count aloud with me.

 **STUDENTS DO:** Count aloud to 7 with the teacher.

TEACHER SAY: Oh no. These two cards do not equal 5. What do I do now?

 **STUDENTS DO:** Respond together: Put them back.

TEACHER SAY: That is right. I did not Make Five, as the game is called. You might get it wrong and that is okay. I just got it wrong but now it is my partner's turn. When it is my turn again, I will get it right.

 **STUDENTS DO:** Helper picks two cards that equal 5 as the class observes.

3. TEACHER SAY: We keep playing until there are no more ways to make 5. There might still be cards left, but if they do not equal 5 together, we cannot pick them up. If you and your partner are not sure, ask another classmate or raise your hand and wait for me to check.

TEACHER DO: Hand out decks of cards to each pair of students. Direct students arrange the cards faceup in any order. Help as needed.


 **STUDENTS DO:** Work with **Shoulder Partner** to take arrange their cards, then take turns finding two cards that make 5.


TEACHER DO: Check work when requested. If time permits, have students play another round. Then use an **Attention Getting Signal**.

Share (5-10 minutes)

Directions


1. TEACHER DO: Hand out math journals and have students open them to the page for **Lesson 103**.

 **STUDENTS DO:** Open math journals to the page for **Lesson 103**.

 **TEACHER SAY:** Think of the different ways you and your partner made 5 while you were playing the game. In your journal, show all the ways you made 5. You can draw pictures or write numbers.

 **STUDENTS DO:** Show different ways to make 5 in their math journals.

TEACHER DO: After students have worked for about five minutes, ask them to share their answers.

 **STUDENTS DO:** Selected students share their examples and show their work on the board.

TEACHER SAY: Wonderful work. If you missed some ways of making 5, you can add them to your journal later.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Compose and decompose quantities within 10. Apply strategies to add within 10. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Number cards 0 to 10 (one set per pair of students) Sets of 0 to 6 number cards from Lesson 103 (one set of 18 cards per pair of students and one set for the teacher)
LESSON PREPARATION		
<ul style="list-style-type: none"> Reuse the decks of dot number cards from Lesson 103. Create sets of number cards 0 to 10 (one set per pair of students). (See Number Cards 0-10 Blackline Master.) 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room to move.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on.

TEACHER SAY: Make sure you count as you do each movement.

- Blow 1 huge bubble and pop it.
- Blow 3 tiny bubbles and give each one a tiny pop.
- Stand on one leg and hop 5 times.
- Using both legs, jump 7 times.
- Stand tall and pretend you are a water fountain. Spray water in the air with your hands 9 times.



STUDENTS DO: Follow each direction by doing each movement the correct number of times and counting aloud.

TEACHER SAY: Exceptional work pretending and counting. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Arrange your deck of 18 number cards (0 to 6) faceup in random order so students can see them.

TEACHER SAY: In our last math lesson, we played Make Five and used the number cards to find different ways to add two numbers to total 5. In your journals you recorded your work using pictures or numbers. Today, we will play the same game, but this time we will make different numbers. Show me the number of fingers you hope we make.

 **STUDENTS DO:** Show numbers on fingers.


TEACHER SAY: Today, I will give you two decks of cards. One deck is the same as the deck you used yesterday. The other deck shows numbers 0 to 10. You will arrange the first deck faceup in any order, just as we did yesterday. You will place the deck of number cards facedown.

TEACHER DO: Lay your number cards in a pile facedown and mix them up.


TEACHER SAY: To play the game today, you will work with your **Shoulder Partner**. First, I pick a card from the pile of number cards. I look at the card to see what number is on it. Then, I find two cards from my other deck that make that number. If I cannot find two cards, I must pass to my partner. I will pull a **Calling Stick** and ask a student helper to work with me as a demonstration.

TEACHER DO: Pull a **Calling Stick**.

TEACHER SAY: You can go first. Pull a number card.

 **STUDENTS DO:** Helper pulls a number card while the class observes.

TEACHER SAY: Say the number aloud, then look for two dot number cards that will make that number.

 **STUDENTS DO:** Helper says the number and finds two dot number cards that equal that number while the class observes.

TEACHER SAY: Let's count to make sure that these two cards make _____ (number student drew).

 **STUDENTS DO:** Count aloud with the teacher.

TEACHER SAY: If we count them and the total is not _____ (number student drew), what do we do?


 **STUDENTS DO:** Respond together: Put the cards back.

TEACHER SAY: Yes, put the cards back. You might get it wrong and that is okay. You let your partner take their turn and you try again next time.

TEACHER SAY: We keep playing until there are no more ways to make numbers. There might still be dot number cards left. If you and your partner are not sure, ask another classmate or raise your hand and wait for me to check.

Note to the Teacher: You can vary the difficulty of this game by limiting or increasing the number and value of cards in the decks. For advanced students, you may use only number cards instead of dots or a mixture of both.

TEACHER DO: Hand out decks of dot number cards (from **Lesson 103**) to each pair of students. Direct students lay out cards faceup. Help as needed. Then hand out decks of number cards to each pair of students. Direct students to lay them facedown in one pile.


 **STUDENTS DO:** Play the game with their **Shoulder Partners**.


TEACHER DO: Check students' work when asked. If time permits, let students play another round. Then use an **Attention Getting Signal**.

Share (5-10 minutes)

Directions

1. TEACHER DO: Hand out math journals. Have students open them to the page for **Lesson 104**.

 **STUDENTS DO:** Open math journals to the page for **Lesson 104**.

 **TEACHER SAY:** I am going to give you a number. Think of one way you can make that number. Draw a picture or write numbers in your math journal to show how you would make that number.


TEACHER DO: Announce the number you would like students to make (within 10).

 **STUDENTS DO:** In their math journals, show one way to make the number announced by the teacher.

TEACHER SAY: Raise your hand if you would like to share your work.

 **STUDENTS DO:** Raise hands to volunteer. Selected students show their work on the board.

TEACHER DO: Try to choose students who made the number in different ways. Students who are observing can copy their friends' ideas into their math journals.

 **STUDENTS DO:** Volunteer. Observe friends' work. Copy new ideas into their math journals.

TEACHER SAY: Wonderful work today. You are learning so much about numbers.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply strategies to add within 10.

KEY VOCABULARY

- Add
- Equal sign
- Total

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Large poster of **Lesson 105**
- Paper dice (0 to 5) (two strips per pair of students)
- Scissors
- Cup or small paper bag (one per pair of students)

LESSON PREPARATION

- Create a large poster matching the math journal page for **Lesson 105**. (See Chapter Preparation)
- Gather dice, two per pair of students. (See Chapter Preparation for dice alternatives.)



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today we are going to stand up, stomp, and count to 10. I will show you by stomping and counting first. Then we will do it together.

TEACHER DO: Model stomping and counting movement. Each stomp receives a number: right foot down is 1, left foot down is 2, right foot down is 3, and so on.

TEACHER SAY: Now it is your turn. Everyone, stand. Let's stomp and count together. We will count to 10 three times.



STUDENTS DO: Stomp and count to 10 three times with the teacher.

TEACHER SAY: Splendid stomping and counting. Give your **Shoulder Partner** a handshake and have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake and sit.

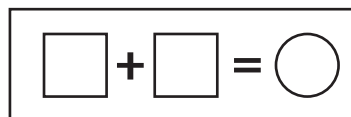


Learn (25-30 minutes)

Directions

*Note to the Teacher: This lesson uses the **I Do, We Do, You Do** instructional strategy.*

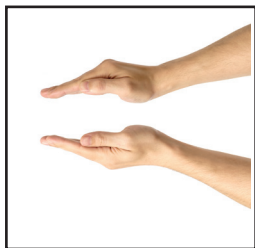
1. TEACHER DO: Draw the diagram below on the board or chart paper.



TEACHER SAY: Lean and Whisper to your **Shoulder Partner** the shapes you see on the board.



STUDENTS DO: Lean and Whisper to **Shoulder Partner**: Square, circle, and/or equal sign.



TEACHER SAY: I see two squares and one circle. Then I see two small lines near each other that look a bit like rectangles. This is a special math symbol. We have used our hands to show equal before. Show me equal with your hand signal.



STUDENTS DO: Show equal with hands.

TEACHER DO: Point to the equal sign.

TEACHER SAY: This is what it looks like when we write it. This is the equal sign. Raise a hand and tell me what equal means.



STUDENTS DO: Raise hands to volunteer. Selected students share their answers.

TEACHER SAY: I have a cup with 12 squares. I am going to call them paper dice. The paper dice have dots on them—except for two paper dice that do not have any dots at all. We will use the paper dice to play a game called Add the Dots. The game will help us practice adding. I will show you how to play. First, I will shake up my cup and take out two paper dice.

TEACHER DO: Shake the cup. Take out two paper dice. Count aloud the dots on the first paper die.

TEACHER SAY: There are _____ (number of dots) dots on my first paper die. I will draw those dots in the first square on the board.

TEACHER DO: Draw dots in the first square.

TEACHER SAY: Now, I will count the dots on the second paper die.

TEACHER DO: Count aloud the dots on the second paper die.

TEACHER SAY: There are _____ (number of dots) dots on my second paper die. I will draw those dots in the second square on the board.

TEACHER DO: Draw dots in the second square.

TEACHER SAY: What shape is left to fill in?



STUDENTS DO: Respond together: The circle.

TEACHER SAY: I wonder what goes in the circle.

TEACHER DO: Make thinking face and give **Think Time**.

TEACHER SAY: **Turn and Talk** to your **Shoulder Partner** about what might go inside the circle.



STUDENTS DO: **Turn and Talk** to **Shoulder Partner**.

TEACHER SAY: The circle is where I will write the total. The total is how many dots my paper dice are showing all together. What goes in the circle?



STUDENTS DO: Respond together: The total.

TEACHER SAY: I will write the total in the circle. Help me count all the dots.

TEACHER DO: Count all of the dots aloud.



STUDENTS DO: Count the dots aloud with the teacher.

TEACHER SAY: The total is _____ (total number of dots). I will write that number in the circle. That number is how many dots I have all together.

TEACHER DO: Write the total in the circle.

TEACHER SAY: There is an equal sign between the squares and the circle. That means that the number of dots on the squares is equal to—or the same amount as—the number in the circle.

TEACHER DO: Hand out math journals. Have students open their journals to the page for **Lesson 105**. Display the poster you created.



STUDENTS DO: Open math journals to the page for **Lesson 105**.

TEACHER SAY: You and your **Shoulder Partner** are going to play the Add the Dots Game together. In your math journal on Lesson 105, you will see the same thing I have on my poster—squares and circles. You will get two strips of squares. Each of you will cut apart one strip so you have 12 separate squares. Then, you will put all of the squares in a cup.

TEACHER DO: Show students your paper dice in your cup.

TEACHER SAY: One of you will shake the cup. Then, both of you will take one paper die out of the cup without looking. You will draw your dots and your partner's dots in the squares, count all of the dots, and write the total in the circle. First, let's play the game together. We will write in the squares and circle next to the star. After that, you and your partner will cut apart your squares and do the two problems marked with the heart and the moon.

TEACHER DO: Select a student helper to pull two paper dice from the cup.



STUDENTS DO: Helper joins the teacher at the front of the room and pulls two paper dice from the cup.

TEACHER SAY: Thank you, _____ (student's name). Let's count the dots on the first paper die.

TEACHER DO: Count aloud the dots on the first paper die.



STUDENTS DO: Helper counts aloud with the teacher.

TEACHER SAY: We counted _____ (number of dots) dots on the first paper die. Point to the star in your math journal.



STUDENTS DO: Point to the star in their journals.

TEACHER SAY: Move your finger over to the first square.



STUDENTS DO: Move fingers to the first square.

TEACHER DO: Point to the first square on the poster. Make sure students have the correct square before moving on.

TEACHER SAY: In that square, we will draw _____ (number on first paper die) dots. When you are done, please give me a **Thumbs Up**.



STUDENTS DO: Helper draws dots in the first square on the poster. Seated students draw dots in the first square in their math journals. Give **Thumbs Up** when done.

TEACHER DO: Repeat process for second paper die.



STUDENTS DO: Helper draws dots in the second square on the poster. Seated students draw dots in the second square in their math journals. Give **Thumbs Up** when done.

TEACHER SAY: Now we count all the dots to find the total. Count and **Whisper** the total into the circle.



STUDENTS DO: Count all of the dots. **Whisper** the total into the circle.

TEACHER SAY: Let's count the total together.

 **STUDENTS DO:** Count aloud with the teacher.


TEACHER SAY: There are _____ (total number of dots) dots all together. That is our total. We will write that number in the circle.

TEACHER DO: Write the total in the circle.

 **STUDENTS DO:** Write the total in the circle.

TEACHER SAY: I did one round of the Add the Dots game. Then, we did one round together. Now, you will do three rounds of the Add the Dots game with your **Shoulder Partner**.

TEACHER DO: Hand out two paper dice strips and scissors to each pair of students.

 **STUDENTS DO:** Pair with **Shoulder Partner** to complete the addition activity on the page for **Lesson 105** in the math journal. Provide additional practice, if needed.

TEACHER DO: Walk around and observe students as they work. Listen to their conversations and take note of any students who are ready for a challenge and students who may need additional instruction and practice.

Share (5-10 minutes)

Directions

1. TEACHER SAY: Marvelous job playing the Add the Dots game. I would like you to share your work with a friend who was not your partner. Think about how to use the equal sign when explaining your work and looking at your friend's work. Please **Hands Up, Pair Up**.


 **STUDENTS DO:** Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause.) Pair Up.

 **STUDENTS DO:** Clap hands and stand together with a nearby student. Share work.

TEACHER DO: Give time for students to share. Then, use an **Attention Getting Signal**.

TEACHER SAY: Let's talk about the equal sign. How did you use it to explain your work? What does it mean? Why do we use it? Raise your hand to share your thinking about the equal sign.

 **STUDENTS DO:** Raise hands to volunteer. Selected students share their thinking about the equal sign, what it means, and why we use it.

TEACHER DO: Praise all students who shared their thinking. Reassure students they will get additional practice.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Demonstrate understanding of mathematical symbols: +, =. 	<ul style="list-style-type: none"> Addition sign Equal sign Plus sign Symbol 	<ul style="list-style-type: none"> Calendar Math Area Paper dice (0 to 5) (two sets per pair of students) from Lesson 105 Cup or small paper bag (one per pair of students) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> No new preparation needed. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room to move.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on.

TEACHER SAY: We are going to pretend we are in an orchard with many fruit trees. We will use each hand to reach up and pick fruit. Then we will drop it in a basket. Make sure you count as you drop the fruit in your basket.

- Pick 2 cherries from this cherry tree.
- Pick 4 apples from this apple tree.
- Pick 6 lemons from this lemon tree.
- Pick 8 oranges from this orange tree.
- Pick 10 figs from this fig tree.



STUDENTS DO: Follow each direction. Do each movement the correct number of times and count aloud.

TEACHER SAY: Fantastic. Give your **Shoulder Partner** two handshakes and then have a seat.



STUDENTS DO: Give their **Shoulder Partner** two handshakes and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Hand out math journals. Have students open them to the page for **Lesson 106**.



STUDENTS DO: Open math journals to the page for **Lesson 106**.

TEACHER SAY: In our last math lesson, we played a game called Add the Dots. Our journal

page looked a little like this page, but something is different. Raise your hand and tell me how this page is different.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking about how the page is different.

TEACHER SAY: Today's math journal page does not have a star, heart, or moon symbol, but it does have a symbol between the two boxes that was not on the page we did yesterday. Give me a **Thumbs Up** if you know what that symbol stands for.



STUDENTS DO: Give a **Thumbs Up** if they recognize the addition sign.

TEACHER SAY: That is the addition sign. It means to add, or put together. You added numbers together when you counted the total number of dots. We will add again today. Who remembers how to play the Add the Dots game? Raise your hand if you remember.



STUDENTS DO: Raise hands if they remember how to play the game. Selected students review the rules and processes for playing the game.

TEACHER SAY: Great job. Your math journal has enough spots for you to play six games. I am going to hand out your materials. As soon as you receive your materials, you and your **Shoulder Partner** may begin to play. Be sure to record your work in your math journal.

TEACHER DO: Hand out a cup and two sets of 0 to 5 paper dice to each pair of students.



STUDENTS DO: Play Add the Dots with their **Shoulder Partner**. Record their work in their math journals.

TEACHER DO: Walk around and observe students' work. Listen to their conversations and check their calculations. Note which students are able to work through the game quickly and efficiently and which students may need additional practice and support. At the end of the period, use an **Attention Getting Signal** and prepare students for Share.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Mathematics uses a lot of symbols. We have used symbols to show greater than, less than, and equal to. We have seen symbols that tell us we need to do something with numbers or quantities. Let's talk about the addition symbol. We can also call it the plus sign. Why is it important? What does it mean? Why do we need it? Think for a moment.



STUDENTS DO: Think quietly about why the addition is important, what it means, and why it is needed.

TEACHER SAY: Turn to your **Shoulder Partner** and share your thinking with each other.



STUDENTS DO: Share thinking about addition symbol with partner.

TEACHER SAY: Raise your hand if you would like to share your thinking.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking about the addition symbol.

TEACHER DO: Listen to students' thinking. Reinforce ideas that are helpful to students' understanding of addition. Students should recognize symbols as shortcuts for words or actions in math.

TEACHER SAY: Wonderful work today. We will continue to learn and practice new math skills in our next math lesson.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers. 	<ul style="list-style-type: none"> Equal sign Equal to Addition sign Greater than Less than Plus sign Symbol 	<ul style="list-style-type: none"> Calendar Math Area Paper dice (0 to 5) (two sets per pair of students) from Lesson 105 Cup or small paper bag (one per pair of students) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> No new preparation needed. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: I would like to know what you would like to do for Movement Math. What is your favorite Movement Math routine? Give me a **Thumbs Up** if you have an idea you would like to share.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected students suggest a Movement Math routine.

TEACHER DO: Note students' favorite routines. Select one to do today for Movement Math.



STUDENTS DO: Follow each direction. Do each movement the correct number of times and count aloud.

TEACHER SAY: Fantastic. Thank you for your helpful ideas. Give your **Shoulder Partner** three high fives and then have a seat.



STUDENTS DO: Give their **Shoulder Partner** three high fives and sit.



Learn (25-30 minutes)

Directions

Note to the Teacher: This game can be played with students at a variety of levels of understanding. Full participation requires multistep sequencing and an understanding of the concepts of identifying numbers, adding, and determining greater than/less than between two numbers. Encourage students to use strategies that make sense to them, including counting the dots, using fingers, and adding mentally.

1. TEACHER SAY: We have been playing Add the Dots the past couple days. How many of you think you are getting very good at adding two numbers together to find the total?



STUDENTS DO: Raise hands to show they think they are improving at addition.

TEACHER SAY: Today, we are going to continue to play Add the Dots, but we are adding a new step. Who remembers what words greater than and less than mean? Raise your hand if you remember.



STUDENTS DO: Raise hands if they remember the meaning of greater than and less than. Selected students explain the meaning and give examples when asked.

TEACHER DO: Write 7 and 3 on the board.

TEACHER SAY: Which number is greater than the other number?



STUDENTS DO: Respond together: 7.

TEACHER SAY: Which number is less than the other number?



STUDENTS DO: Respond together: 3.

TEACHER SAY: Yes, 7 is greater than 3. 3 is less than 7. What do we say if the numbers are the same?



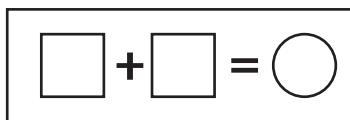
STUDENTS DO: Respond together: Equal.

TEACHER SAY: Yes, I can say 7 is equal to 7. Today, you will play Add the Dots just as you have been playing. However, you and your partner will each do your own addition problem. When you both are finished solving your problems, you compare your answers and color in the circle with the answer that is greater. Let's try one together. I would like _____ (student's name) to come up and help me.



STUDENTS DO: Selected student goes to the front of the room.

TEACHER DO: Draw two Add the Dots equations on the board, one for you and one for the student helper. Each of you will need a cup with paper dice in it.



TEACHER SAY: _____ (Student's name) will pull out two paper dice, draw the dots on each square, and write the total number of dots in the circle. I will do the same thing.

TEACHER DO: Pull out two paper dice, draw the dots on each square, and write the total number of dots in the circle.



STUDENTS DO: Helper does the same. Seated students observe quietly.

TEACHER SAY: My answer is _____ (your total). _____ (Student's name) has a total of _____ (student's total). Raise your hand if you know which answer is greater.



STUDENTS DO: Raise hands to volunteer. Selected student identifies the greater number.

TEACHER SAY: Yes, _____ (greater number) is the greater number, so we would color in that circle.

TEACHER DO: Lightly shade in the circle on the board with the greater number (or ask the helper to do it).


TEACHER SAY: What should we do if we get the same answer? Raise your hand if you have an idea.




STUDENTS DO: Raise hands to volunteer. Selected students share their thinking.

TEACHER DO: If possible, use one of the student's ideas and tell students how to proceed if they get equal answers, such as shading in both circles.


TEACHER SAY: Let's **Hands Up, Pair Up** to find a partner who you have not played the game with yet. Please **Hands Up, Pair Up**.

 **STUDENTS DO:** Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause.) Pair Up.

 **STUDENTS DO:** Clap hands and stand together with a nearby student.

TEACHER SAY: Find a seat with your partner. Take your journal with you and open it to the page for Lesson 107.


 **STUDENTS DO:** Find a seat with their partners. Open their math journals to the page for Lesson 107.

TEACHER SAY: Each problem has a small picture in front of it. You and your partner should be working on the same picture problem at the same time. So, we will both do the star problem first, then do the heart problem, and so on. You can use a light-colored crayon or your pencil to shade in your answer if it is the greater number. What are your questions?

 **STUDENTS DO:** Raise hands to ask questions, if necessary.

TEACHER SAY: I will bring you your materials. As soon as you have them, you may begin playing.

TEACHER DO: Hand out cups and paper dice to each pair of students.


 **STUDENTS DO:** Play the Add the Dots game with their partners. Record their work in their math journals. Shade in the number that is greater.

TEACHER DO: Walk around and observe students' work. Listen to their conversations and take note of which students are ready for a challenge and which students may need additional instruction and practice.

Share (5-10 minutes)

Directions

1. TEACHER SAY: Why do you think it is important that we are able to add numbers together and tell which numbers are greater than or less than? When might we use those skills outside of school? Take a moment to think about it. Give me a **Thumbs Up** when you are ready to share your thinking.

 **STUDENTS DO:** Think quietly for a moment. Give a **Thumbs Up** when they are ready to share. Selected students answer the questions and explain their thinking.

TEACHER DO: Listen to students' answers and take note of responses that indicate strong understanding of the importance of mathematics in daily life. Listen for misconceptions and correct them, if possible. Praise all students for sharing their thinking today and for working so hard to learn mathematics.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers. 	<ul style="list-style-type: none"> Equal sign Equal to Addition sign Greater than Less than Plus sign Symbol 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Paper dice (0 to 5) (two sets per pair of students) from Lesson 105 Cup or small paper bag (one per pair of students) Ball
LESSON PREPARATION		
<ul style="list-style-type: none"> No new preparation needed. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER DO: Prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today we will play Catch and Count backward. You will stay seated until you catch the ball. I will point to a student and say 10. That student must stand and catch the ball. Then, that student will point to a classmate and count 9. That student must stand and catch the ball, then point to a classmate and count 8. That student will stand and catch the ball, and so on. We will continue this movement and count until we reach 0. Then, we will start counting backward again from 10 to 0 and play until everyone is standing. Make sure you have room to move.

TEACHER DO: Point to a student to stand. Toss the ball and count 10.



STUDENTS DO: Catch and count until 0. Repeat until everyone is standing.

TEACHER SAY: Magnificent job catching and counting. Have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions


1. TEACHER DO: Hand out math journals.

TEACHER SAY: Raise your hand if you remember how to play the Add the Dots game with the new step.



STUDENTS DO: Raise hand if they remember how to play. Selected students explain how to play the game, compare numbers, and shade in the greater number.


TEACHER SAY: You are going to play again today. Let's **Hands Up, Pair Up** to find a partner to play with. Please **Hands Up, Pair Up**.

 **STUDENTS DO:** Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause.) Pair Up.

 **STUDENTS DO:** Clap hands and stand together with a nearby student.


TEACHER SAY: Find a seat with your partner. Take your journal with you and open it to the page for Lesson 108.

 **STUDENTS DO:** Find a seat with their partners. Open their math journals to the page for Lesson 108.

TEACHER SAY: Remember to make sure you and your partner are working on the same problem at the same time. Some of you are getting very good at this game, so there are extra problems on the next page. If you fill up this page, keep going. Raise your hand if you have questions.

 **STUDENTS DO:** Raise hands to ask questions, if necessary.

TEACHER DO: Hand out a cup and two sets of 0 to 5 paper dice to each pair of students. Tell students to begin working once they have their materials.

 **STUDENTS DO:** Play Add the Dots game with partners. Record their work in their math journals. Compare answers to identify the number that is greater.


TEACHER DO: Observe students as they work to offer help and evaluate students' understanding and progress. At the end of the Learn segment, have students return to their seats and keep their math journals open.

Share (5-10 minutes)

Directions

1. TEACHER SAY: Keep up the good work. Think about how adding with numbers is the same or different from adding dots. When you are ready to share your thinking, raise your hand.

TEACHER DO: Give **Think Time**.

 **STUDENTS DO:** Think quietly for a moment. Raise hands when they are ready to share their thinking. Selected students discuss how adding numbers is the same or different from adding dots.

TEACHER SAY: I would like you to share your work with your **Shoulder Partner**. Think about how to use the plus sign and equal sign when explaining your work. Look at your partner's work. How did they use the plus sign and equal sign to explain their work?

 **STUDENTS DO:** Share their work with **Shoulder Partners**. Use the symbols to explain their thinking.

TEACHER DO: Give time for students to share. Then use an **Attention Getting Signal**.

TEACHER SAY: Let's talk about the addition sign. How did you use it to explain your work? How did your partner use it? Raise your hand to share about the plus sign.

 **STUDENTS DO:** Raise hands to volunteer. Selected students share their ideas.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Compare two numbers. Represent addition in equations. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Large set of Number Cards 0 to 10 Paper dice (0 to 5) (two sets per pair of students) from Lesson 105 Cup or small paper bag (one per pair of students) Poster showing a large plus sign and equal sign
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a poster showing a large plus sign and equal sign. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER DO: Get large Number Cards (0 to 10) and prepare for Movement Math.

TEACHER SAY: Let's do Movement Math. Today I am going to show you some number cards. I want you to clap the number you see. For example, if I hold up the 5 card, you clap five times. Let's try it.



STUDENTS DO: Join the teacher in the movement and counting pattern.

TEACHER DO: Repeat using a different card and different movement. Pause for students to do movement.

TEACHER SAY: Turn to your **Shoulder Partner** and give them a high five and have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five, then sit.



Learn (25-30 minutes)

Directions

Note to the Teacher: Students are playing the Add the Dots game again but are transitioning to using symbols and numbers to record their addition sentences. Review the game rules and procedures as needed, but be sure to focus on the use of numbers and symbols to create addition equations.

1. TEACHER SAY: Today, we will play the Add the Dots game, but we are going to make it a little more challenging. Instead of drawing dots, we will write numbers and you will write your own addition and equal symbols. First, watch me.

TEACHER DO: Select a student helper to come to the front of the room.



STUDENTS DO: Selected student goes to the front of the room.

TEACHER DO: Play the Add the Dots game with the helper, but instead of drawing dots in squares and circles, write the numbers, plus sign, and equal sign. Help the student helper write the numbers and symbols as needed.



STUDENTS DO: Helper pulls two paper dice cards from the cup, writes the number of dots on each square, and creates an addition equation using the addition and equal symbols.

TEACHER SAY: We just wrote addition equations. We wrote the numbers, the plus sign, and the equal sign. Which one of our answers is greater? Raise your hand if you know.



STUDENTS DO: Raise hands to volunteer. Selected student answers the question.

TEACHER SAY: Good job. I am going to circle the greater number.

TEACHER DO: Circle the answer that is greater.

TEACHER SAY: You are going to do the same thing when you play the game with your **Shoulder Partner**. You can help each other write the numbers and the symbols. Do you have any questions?



STUDENTS DO: Raise hands if they have questions.

TEACHER DO: Answer students' questions. Then hand out math journals to each student, as well as cups and paper dice to each pair of students.

TEACHER SAY: Open your math journals to the page for Lesson 109.



STUDENTS DO: Open math journals to the page for Lesson 109.

TEACHER SAY: There is a picture on each line. You will write your addition equations on the line.

TEACHER DO: Demonstrate on the board. Draw a long line, then write a sample equation. Talk through the steps to help students understand.

TEACHER SAY: You may begin playing the game with your **Shoulder Partner**.



STUDENTS DO: Play Add the Dots with their **Shoulder Partners**. Record their addition equations in their math journals.

TEACHER DO: Walk around and observe students as they work. Help them write numbers and mathematical symbols as needed. Note which students are doing well and which students might need additional instruction and practice. When students are finished, have them keep their journals open to the page for Lesson 109.




Share (5-10 minutes)


Directions

1. TEACHER SAY: Marvelous job. Let's share our work. I am going to pull two **Calling Sticks** at a time. If I call your name, take your journal to the board and write one of your addition equations on the board.

TEACHER DO: Pull two **Calling Sticks**.

 **STUDENTS DO:** Selected students write one of their equations on the board using numbers and symbols.

TEACHER SAY: Great. Raise your hands if you know which answer is greater.

 **STUDENTS DO:** Raise hands to volunteer. Selected student answers the question. Helper with the greater answer circles their answer.

TEACHER DO: Repeat the process until the end of the Share segment.

TEACHER SAY: You have learned so much about addition and putting numbers together. In our next math lesson, we will explore subtraction.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Solve subtraction problems through **Role Play**.

KEY VOCABULARY

- Minus
- Subtract
- Subtraction

MATERIALS

- Calendar Math Area
- Math journal and pencil

LESSON PREPARATION

- No new preparation needed.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine. See **Lesson 61** for instructions, if needed.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Let's do Movement Math. Stand up and make sure you have room to move.



STUDENTS DO: Stand up.

TEACHER DO: Select an idea that students suggested in **Lesson 107**.



STUDENTS DO: Participate in Movement Math.

TEACHER SAY: That is what I call a great job of moving and counting. Give your **Shoulder Partner** a high five on the right and a high five on the left. Then, have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five on the right and a high five on the left, then sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: We have been working on stories where we add numbers together. Today, we will **Role Play** a different kind of math story. We will take numbers away or break them apart. This kind of math is called subtraction. Think about this: Have you ever been playing with friends and one of them had to go home?



STUDENTS DO: Call out answers.

TEACHER SAY: This is an excellent example of a subtraction story to **Role Play**. Think of a time when you and two of your friends were playing together. Then, one of you had to go home. Who can help me **Role Play** this story?



STUDENTS DO: Raise hands to volunteer.


TEACHER DO: Select three students to go to the front of the room.

TEACHER SAY: How many friends are here?

 **STUDENTS DO:** Respond together: 3.

TEACHER SAY: These three friends are playing together. One of them has to go home. Wave goodbye to your friend.

TEACHER DO: Select one student to go back to their seat.

 **STUDENTS DO:** Selected student goes back to their seat. Remaining students wave goodbye.

TEACHER SAY: How many friends are left?

 **STUDENTS DO:** Respond together: 2.

TEACHER SAY: Very good. We had 3 friends. We took 1 friend away. We have 2 friends left. We subtracted 1 friend. We can say $3 \text{ minus } 1 \text{ equals } 2$. You say it with me.


 **STUDENTS DO:** Repeat together: $3 \text{ minus } 1 \text{ equals } 2$.

TEACHER SAY: Let's try another subtraction story. There are 4 friends eating lunch. How many friends are eating lunch together?


 **STUDENTS DO:** Respond together: 4.

TEACHER SAY: I will use the **Calling Sticks** and ask four people to **Role Play** the story.

TEACHER DO: Pull four **Calling Sticks** and have student helpers **Role Play**.

 **STUDENTS DO:** Selected students go to the front of the room to **Role Play** the subtraction problem. Seated students observe and help when asked.

TEACHER SAY: Two friends finish lunch and go to the playground. They will rub their belly and say, "Yum, yum," as they walk away.

 **STUDENTS DO:** Two helpers rub their bellies, say, "Yum, yum," and walk away as seated students observe.

TEACHER SAY: How many friends are left eating lunch?

 **STUDENTS DO:** Respond together: 2.

TEACHER DO: Write $4 - 2 = 2$ on the board.

TEACHER SAY: Four minus 2 equals 2. You say it with me.

 **STUDENTS DO:** Repeat together: $4 \text{ minus } 2 \text{ equals } 2$.

TEACHER SAY: Thank our student helpers as they return to their seats.


 **STUDENTS DO:** Thank student helpers as they sit.

TEACHER SAY: Let's try another subtraction story. There are 5 friends riding the bus. I will use the **Calling Sticks** and ask five people to **Role Play**.

TEACHER DO: Pull five **Calling Sticks** and have student helpers **Role Play**.

 **STUDENTS DO:** Selected students **Role Play** the subtraction problem. Seated students observe.

TEACHER SAY: The bus stops and 3 friends get off. Tell them to have a nice day.

 **STUDENTS DO:** Three students return to their seats. Remaining students tell them to have a nice day.

TEACHER SAY: How many children are left on the bus?



STUDENTS DO: Respond together: 2.

TEACHER DO: Write $5 - 3 = 2$ on the board.

TEACHER SAY: Five minus 3 equals 2. You say it with me.



STUDENTS DO: Repeat together: 5 minus 3 equals 2.

TEACHER SAY: Very nice. Thank our student helpers with a beep beep as they ride the bus back to their seat.



STUDENTS DO: Respond together as helpers sit: Beep beep.

TEACHER SAY: Please take a moment and think of another subtraction story problem. Maybe we will **Role Play** your story.

TEACHER DO: Give **Think Time**.



STUDENTS DO: Think quietly about an idea for a subtraction story.

TEACHER SAY: Please **Hands Up, Pair Up**. Tell a partner your ideas for **Role Play**.



STUDENTS DO: Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause) Pair Up.



STUDENTS DO: Clap hands and stand together with a nearby student. Share ideas for **Role Play**.

TEACHER DO: Give time for students to share. Then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand if you have an idea to share.



STUDENTS DO: Raise hands to share or listen actively to classmates.

TEACHER DO: Select volunteers to **Role Play** one or more of the students' subtraction stories.



STUDENTS DO: Role Play subtraction stories, if asked. Observe quietly and help friends when needed.

Share (5-10 minutes)

Directions

1. TEACHER SAY: Great work using your imagination to **Role Play**. Think for a moment about your favorite subtraction **Role Play** story.

TEACHER DO: Give **Think Time**.

TEACHER SAY: I will hand out your math journal. Turn to Lesson 110 and draw your favorite subtraction story.

TEACHER DO: Hand out math journals.



STUDENTS DO: Open math journals to the page for **Lesson 110**. Draw favorite **Role Play**.

2. TEACHER SAY: Now we will take a **Gallery Walk** and look at our friends' subtraction drawings.



STUDENTS DO: Take a **Gallery Walk**.

TEACHER DO: Ask questions during the **Gallery Walk**. Praise work. Check for understanding by asking a student to explain his/her drawing.




KINDERGARTEN I

Mathematics

Chapter 6

Lessons 111-120

Lessons 111-120

COMPONENT		DESCRIPTION	TIME
	Calendar Math and Movement	During this daily routine, students develop number sense, calendar sense, early place value concepts, counting fluency, and problem-solving skills. Students explore quantity and practice counting through patterns and movement.	15-20 minutes
	Learn	During this daily routine, students learn and apply various math skills as the teacher guides them through review, instruction, and practice.	25-30 minutes
	Share	During this daily routine, students develop their ability to express mathematical ideas by talking about their discoveries, using math vocabulary, asking questions to make sense of learning tasks, clarifying misconceptions, and learning to see things from classmates' perspectives.	5-10 minutes

Learning Indicators

Throughout this chapter, students will work toward the following learning indicators:

OPERATIONS AND ALGEBRAIC THINKING:

- Represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, or verbal explanations, expressions, or equations.
- Add and subtract within 10 using strategies such as:
 - Using objects or drawings to represent a problem.
 - Decomposing numbers into pairs in more than one way (e.g., $5 = 2 + 3$ and $5 = 4 + 1$).
 - Finding the number of objects that make 10 when added to any number 1 through 9.

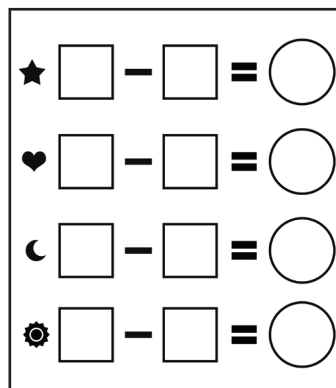
NUMBERS AND OPERATIONS IN BASE TEN:

- Compose and decompose 10 using objects, drawings, etc.

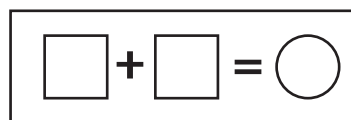
LESSON	INSTRUCTIONAL FOCUS
111	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Represent subtraction problems through Role Play.• Apply strategies to subtract within 5.
112	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to subtract within 5.
113	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to subtract within 10.
114	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to subtract within 10.
115	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to subtract within 10.
116	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to add within 10.• Illustrate an addition problem.
117	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply strategies to subtract within 10.• Illustrate a subtraction problem.
118	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply skills and concepts to play math games.
119	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply skills and concepts to play math games.
120	Students will: <ul style="list-style-type: none">• Participate in Calendar Math activities.• Apply skills and concepts to play math games.

Chapter Preparation

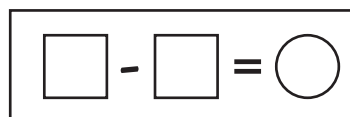
- For **Lesson 112**:
 - Gather sets of five counters (one set per pair of students).
 - Prepare number lines (one per student). (See Number Line 0-10 Blackline Master.)
 - Gather paper clips, one for each pair of students.
- For **Lessons 113 and 114**:
 - Gather sets of 10 counters (one set per pair of students).
 - Print out a set of Subtraction Spinners (one set per pair of students). (See Subtraction Spinner Blackline Master.)
 - Gather paper clips (one for each pair of students).
 - Create a poster that looks like the math journal page for **Lesson 113** and **Lesson 114**.



- For **Lesson 115**:
 - Create a poster that looks like the math journal page for **Lesson 115**.
 - Create a paper “tent” for each pair of students.
 - * Fold a piece of card stock so that it stands up like a tent.
 - Gather sets of 10 counters (one set per pair of students).
- For **Lesson 116**:
 - Create one large tree using construction paper or cardboard.
 - Print and cut out 10 large circles to represent pomegranates. Color five red and five yellow.
 - * Prior to the lesson, tape four red pomegranates (circles) and one yellow pomegranate (circle) to the large tree. (See Pomegranates Blackline Master.)
 - Create one tree (about 40 cm tall) for each small group of students.
 - * Students will tape or glue pomegranates to the tree during the lesson.
 - Print and cut out pomegranates for students to color (two pomegranates per student).
 - Create a poster with six addition sentence frames.



- For **Lesson 117**:
 - Create a tree on poster paper.
 - Create five purple circles to represent plums.
 - * Use tape to attach them to the tree so they can be easily removed.
 - Create a poster with four subtraction sentence frames.



- For **Lessons 118 through 120**:
 - In the final three math lessons, students will apply the skills they have learned throughout the school year by playing math games and completing math activities. To prepare,

gather materials and review the procedures for the following games. (Refer to the lesson noted for materials and instructions.)

- * Jump Up: **Lesson 6**
 - * 1, 2, 3, Move: **Lesson 6**
 - * Counting Game: **Lesson 12**
 - * Catch and Count: **Lesson 30**
 - * Pattern Game: **Lesson 33**
 - * Dot Card Game: **Lesson 49**
 - * Trash or Treasure: **Lesson 71**
 - * Cup Game: **Lesson 72**
 - * Pom Pom Race: **Lesson 73**
 - * Red and Green: **Lesson 80**
 - * Number Relay Race: **Lesson 81**
 - * Greater Than Game: **Lesson 96**
 - * Slaps: **Lesson 97**
 - * Cave Game: **Lesson 98**
 - * Guessing Game: **Lesson 99**
 - * Stick Puppet **Role Play**: **Lesson 101**
 - * Make 5: **Lesson 103**
 - * Add the Dots: **Lesson 105**
 - * Spin and Subtract: **Lesson 113**
- Make extra sets of game materials to enable students to choose the activities they would like to do. Invite parents to play their child's favorite math game with them.
 - Make sure students have access to the tactile number writing practice cards and the hanger balance and measuring materials.

Teaching Strategies Used

See pages 3-5 of this guide for detailed instructions:

- **Attention Getting Signal**
- **Calling Sticks**
- **Count Off**
- **Gallery Walk**
- **Hands Up, Pair Up**
- **Lean and Whisper**
- **Pair/Share**
- **Shake It, Share It, High Five**
- **Shoulder Partner**
- **Think Time**
- **Think Aloud**
- **Thumbs Up**
- **Turn and Talk**
- **Whisper**

Materials Used

Calendar math area



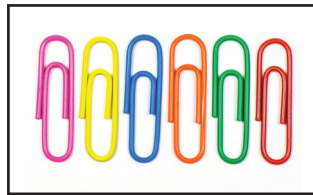
Math journal and pencil



Sets of 5 and 10 counters (one set per student)

Number line 0 to 10 (see blackline master)

Paper clips



Paper tents



Seven trees made of construction paper or cardboard



Subtraction spinners

Crayons



Tape or glue



Poster board or large chart paper



Cut-out circles

Five purple circles cut out

Game materials (various)

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Represent subtraction problems through **Role Play**.
- Apply strategies to subtract within 5.

KEY VOCABULARY

- Minus
- Minus sign
- Number sentence
- Symbol

MATERIALS

- Calendar Math Area

LESSON PREPARATION

- No additional preparation needed.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today, we are going to practice counting while reaching up and down. We will start at 10 and count backward until we reach 0. We will stand, reach up and count 10, then reach down and count 9, and keep going until we reach 0.

TEACHER DO: Model reaching up and down while counting backward, 10 to 0. Repeat three times.

TEACHER SAY: Everyone stand and count with me. We will count from 10 to 0 three times.



STUDENTS DO: Count backward and reach up and down with the teacher three times.

TEACHER SAY: Good work. Give your **Shoulder Partner** a high five and a low five, then have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five and low five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today, we will continue to **Role Play** subtraction stories. Raise your hand if you remember what subtraction is.



STUDENTS DO: Raise hands to volunteer. Selected students share their understanding of subtraction.

TEACHER DO: Correct students' misconceptions. Allow them to share examples, if appropriate. Be sure to summarize to ensure that all students are starting with the same understanding.

TEACHER SAY: Let's use our imaginations to **Role Play** some subtraction stories. Tap your brain to turn on your imagination.

 **STUDENTS DO:** Tap heads.

TEACHER SAY: I will use my imagination and **Role Play** a giraffe reaching up to eat leaves on a tall tree.

TEACHER DO: Stand up, crane neck upward, and pretend to chew leaves.

TEACHER SAY: There are 4 giraffes munching on leaves high up in a tree. I will use the **Calling Sticks** and ask four people to **Role Play**.

TEACHER DO: Pull four **Calling Sticks** and have student helpers **Role Play**.

 **STUDENTS DO:** Selected students **Role Play**. Remaining students observe.

TEACHER SAY: 1 giraffe has a belly full of leaves, so it decides to walk away.

TEACHER DO: Direct one student to walk away.

 **STUDENTS DO:** Selected student returns to seat.

TEACHER SAY: How many giraffes are still munching on leaves?

 **STUDENTS DO:** Respond together: 3.

TEACHER SAY: I knew you could do it tall giraffes. Please have a seat. Please thank our giraffes.

 **STUDENTS DO:** Thank student helpers as they sit.

TEACHER SAY: When we write addition equations, we use symbols to represent the words plus and equals. The symbols tell us what kind of problem it is and what we should do to solve it. For example, the plus sign tells us we should add the numbers together to find the total. We can write subtraction equations using symbols, too.

TEACHER DO: Write $4 - 1 = 3$ on the board. Point to each part of the problem as you discuss it with students.

TEACHER SAY: This problem shows us that we started with 4 giraffes. How many giraffes were full and walked away?

 **STUDENTS DO:** Respond together: 1.

TEACHER SAY: My problem shows that 1 giraffe walked away. The symbol I use to show that I am subtracting or taking away is the minus sign. I read this problem as 4 minus 1 equals 3. You say it with me.

 **STUDENTS DO:** Repeat together: 4 minus 1 equals 3.

TEACHER SAY: Let's use our imagination and try another subtraction story. Tap your brain to get your imagination ready.

 **STUDENTS DO:** Tap heads.

TEACHER SAY: There are 5 bees buzzing around a flower.

TEACHER DO: Stand and buzz around like a bee.

TEACHER SAY: I will use the **Calling Sticks** and ask five friends to **Role Play** this math problem.

TEACHER DO: Pull five **Calling Sticks**.

 **STUDENTS DO:** Selected students **Role Play**. Seated students observe quietly.

TEACHER SAY: Wow, 3 bees see a big red flower and buzz over to it.

TEACHER DO: Direct 3 students to buzz away.

TEACHER SAY: How many bees are left?



STUDENTS DO: Respond together: 2.

TEACHER SAY: Very buzzy little bees. Please buzz back to your seat. Please thank our bees with a buzz.



STUDENTS DO: Thank student helpers with a buzz as they sit.

TEACHER SAY: We can write our subtraction story using numbers and symbols.

TEACHER DO: Write $5 - 3 = 2$ on the board.

TEACHER SAY: Let's try one more today. Five frogs sat by the river. I need 5 frogs to come up and **Role Play**.

TEACHER DO: Pull five **Calling Sticks**.



STUDENTS DO: Selected students go to the front of the room.

TEACHER SAY: The frogs are so hoppy. Look at them hopping around.



STUDENTS DO: Helpers hop around.

TEACHER SAY: Four frogs hopped into the river.

TEACHER DO: Select 4 students to hop back to their desks.



STUDENTS DO: Selected students hop back to their desks.

TEACHER SAY: How many frogs are left at the side of the river?



STUDENTS DO: Respond together: 1.

TEACHER SAY: Help me figure out how to write the subtraction equation. What should I write first? Give me a **Thumbs Up** if you know.



STUDENTS DO: Give a **Thumbs Up** to volunteer. Selected student answers the question.

TEACHER SAY: We started with 5 frogs, so I write the 5 first. What happened to the frogs? Did more frogs come or did some of the frogs leave?

TEACHER DO: Write 5 on the board.



STUDENTS DO: Respond together: Some frogs left.

TEACHER SAY: That means we have to subtract. How do I show that this is a subtraction problem? Give me a **Thumbs Up** if you know.



STUDENTS DO: Give a **Thumbs Up** if they know what symbol to use. Selected student goes to the board and writes a minus sign after the 5.

TEACHER SAY: Great thinking. We started with 5 frogs. Some of the frogs went away, so I show that with a minus sign. How many frogs hopped into the river?



STUDENTS DO: Respond together: 4.

TEACHER DO: Write 4 = after the minus sign.

TEACHER SAY: Remember, the equal sign means that everything on one side of the math problem is equal to everything on the other side of the problem. How many frogs were left?



STUDENTS DO: Respond together: 1.

TEACHER DO: Write 1 after the equal sign.

TEACHER SAY: Read the equation with me.



STUDENTS DO: Say together: 5 minus 4 equals 1.

TEACHER SAY: You did a wonderful job. Thank you for your help. We will work on subtraction again in our next math lesson.



Share (5-10 minutes)

Directions

1. TEACHER SAY: When do we use subtraction in our daily lives? Why do we need to know how to subtract, or take away, and figure out the answer? Think quietly for a moment. Give me a **Thumbs Up** when you have an idea.



STUDENTS DO: Think quietly about when they use subtraction. Give a **Thumbs Up** when they are ready to share. Selected students describe times when they use subtraction in their daily lives.

TEACHER DO: Listen to students' ideas. Note which students have a solid understanding of subtraction and how we use it in our daily lives. Identify students who may need additional instruction and support.

TEACHER SAY: Thank you for sharing your amazing ideas. You are such good math thinkers.

OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities Apply strategies to subtract within 5. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Sets of five counters (one set per student) Number line (0 to 10) (one per student) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> Prepare sets of five counters (one per student). 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today we are going to do a student's choice Movement Math. I will pull a **Calling Stick**. If I call your name, you can pick what kind of Movement Math we do and help me lead it.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student chooses Movement Math and helps the teacher lead it.

TEACHER SAY: Great work, friends. Let's thank our helper and sit down.



STUDENTS DO: Thank helper and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Raise your hand if you can tell us what it means to subtract and how you do it.



STUDENTS DO: Raise hands to volunteer. Selected students share their thinking about subtraction.

TEACHER SAY: Very good. Thank you for sharing your explanations. Today, you are going to practice subtraction again, but you will work on your own to solve problems. You and your **Shoulder Partner** will check each other's work, but you will solve the problems by yourself and write down your own answers.



TEACHER DO: Hand out math journals. Have students open them to the page for **Lesson 112**. Give each student a set of five counters and a number line.



STUDENTS DO: Open math journals to the page for **Lesson 112**.

TEACHER SAY: I am going to give you numbers. You will write them in your journal. Then you will solve the problem and write the answer in the circle. You may use any strategy you like to

solve the problem—counting on your fingers, counters, or the number line. The first problem is the star problem. The first number is 3. Write 3 in the first box.



STUDENTS DO: Write 3 in the first box.

TEACHER SAY: Your second number is 1. Write 1 in the second box. Figure out the answer and write it in the circle.



STUDENTS DO: Write 1 in the second box. Solve the subtraction problem and write the answer in the circle.

TEACHER DO: Observe students as they work. Note what strategies they choose and see if any students appear to be struggling. After one to two minutes (or when all students appear to be done), use an **Attention Getting Signal**.

TEACHER SAY: Check your **Shoulder Partner's** work. Did you get the same answer?



STUDENTS DO: Check **Shoulder Partner's** work. Make corrections, if needed.

TEACHER SAY: Raise your hand if you know the answer.



STUDENTS DO: Raise hands to volunteer. Selected student shares the answer.

TEACHER SAY: Good, 3 minus 1 equals 2. You should have written 2 in the circle. Now we will do the heart problem. The first number is 4. Write 4 in the first box.



STUDENTS DO: Write 4 in the first box.

TEACHER SAY: The second number is 2. Write 2 in the second box.



STUDENTS DO: Write 2 in the second box.

TEACHER SAY: Solve the problem and write your answer in the circle.



STUDENTS DO: Solve the problem and write the answer in the circle.

TEACHER DO: Observe students as they work.

TEACHER SAY: Check your partner's work. Did you both get the same answer?



STUDENTS DO: Check partner's work. Make corrections, if necessary.

TEACHER SAY: Raise your hand if you think you know the answer.



STUDENTS DO: Raise hands to volunteer. Selected students share the answer.

TEACHER SAY: Good, 4 minus 2 equals 2.

TEACHER DO: If time allows, repeat the process for the moon and sun problems. Choose numbers less than or equal to 5.



STUDENTS DO: Work independently to solve the subtraction problems. Check **Shoulder Partner's** work. Make corrections as needed. Share answers with the class if asked.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Let's talk about the strategies you used to solve subtraction problems today. I want to hear from you about the strategies you used and why you picked them. Think quietly for a moment, then raise your hand when you have something to share.



STUDENTS DO: Think quietly, then raise hands when they are ready to share. Selected students discuss the strategies they used and explain why they chose them.

TEACHER SAY: Why is it good to have different strategies to solve problems? Think quietly for a moment, then raise your hand when you have something to share.



STUDENTS DO: Think quietly, then raise hands when they are ready to share. Selected students share their thinking about why it is good to have different strategies to solve problems.

TEACHER SAY: Thank you for sharing your thinking today. It is so exciting to hear you talk like mathematicians. You are learning so much and I am very proud of you.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities Apply strategies to subtract within 10. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Large poster of the math journal page for Lesson 113 Sets of 10 counters (one set per pair of students) Number line (0 to 10) (one per pair of students) Subtraction Spinners (one set per pair of students) Paper clips (one per pair of students) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a large poster of the math journal page for Lesson 113. Gather sets of 10 counters (one set per pair of students). Prepare a set of Subtraction Spinners for each pair of students. (See Chapter Preparation for the Teacher for instructions.) Gather paper clips (one per pair of students). 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today we are going to do a student's choice Movement Math again. I will pull a **Calling Stick**. If I call your name, you can pick what kind of Movement Math we do and help me lead it.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student chooses Movement Math and helps the teacher lead it.

TEACHER SAY: Great work, friends. Let's thank our helper and sit down.



STUDENTS DO: Thank helper and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Raise your hand if you can remind us what it means to subtract and how you do it.



STUDENTS DO: Raise hands to volunteer. Selected students share their explanations for how to subtract.

TEACHER SAY: Wonderful. Thank you for sharing your explanations. Today, you are going to practice subtraction again, but I think you are ready to work with larger numbers. You will play a game with your **Shoulder Partner** called Spin and Subtract. Let's play together first.

TEACHER DO: Display the poster you created that looks like the math journal page for **Lesson 113**. Hold up both spinners and describe how to use them to play the game.

TEACHER SAY: The first spinner has dots that represent numbers 6 through 10. The second spinner has numbers 0 through 5. To play the game, you spin the dot spinner first.

TEACHER DO: Spin the dot spinner. Count the dots, announce the number, and write it on the board in the first square of the first problem on the poster.

TEACHER SAY: This is the number my subtraction problem starts with. Now I spin the number spinner.

TEACHER DO: Spin the number spinner. Announce the number and write it on the board in the second square of the first problem on the poster.

TEACHER SAY: This is the number I am subtracting, or taking away, from the first number. I can use my fingers, my counters, or a number line, or I can draw pictures. When I figure out the answer, I write it in the circle.

TEACHER DO: Model a strategy for solving the subtraction problem and record the answer in the circle on the poster.

TEACHER SAY: Raise your hand if you can help me explain how to play the Spin and Subtract game.



STUDENTS DO: Raise hands to volunteer. Selected students explain how to play the game.



TEACHER DO: Hand out math journals. Hand out spinners, paper clips, counters, and a number line to each pair of students. Have students open their math journals to the page for Lesson 113.



STUDENTS DO: Open math journals to the page for Lesson 113.

TEACHER SAY: Let's play another round together. Raise your hand if you would like to help me.



STUDENTS DO: Raise hands to volunteer. Selected student goes to the front of the room. Helper spins the dot spinner, counts the dots, and announces the number.

TEACHER SAY: Find the star problem at the top of your journal page. Write the number in the first square.



STUDENTS DO: Write the first number in the first square. Helper writes the number in the first square on the poster. Helper spins the number spinner and announces the number.

TEACHER SAY: Write the second number in the second box.



STUDENTS DO: Write the second number in the second square. Helper writes the number in the second square on the poster.

TEACHER SAY: _____ (Student's name), you may use counters, a number line, your fingers, or another strategy to find the answer. Do that now and write your answer in the circle. The rest of you should solve the problem and write your answers in the circle, too. Do that now.



STUDENTS DO: Solve the subtraction problem and write their answers in the circle.

TEACHER DO: Check the helper's work. If it is correct, tell students their answers should match the helper's answer. If it is incorrect, help the student figure out where they made their mistake. They should redo their work and write the correct answer.

TEACHER SAY: Raise your hand if you got the right answer.



STUDENTS DO: Raise hands to show they got the right answer.

TEACHER SAY: Wonderful. You and your **Shoulder Partner** can begin playing Spin and Subtract. Make sure both of you record your work in your math journals. Start with the heart problem.



STUDENTS DO: Play Spin and Subtract with their **Shoulder Partners**.

TEACHER DO: Walk around and observe students as they work. Help students as needed. Ask questions to check their understanding. Have students keep their journals open for Share.



Share (5-10 minutes)

Directions

1. TEACHER DO: Pull **Calling Sticks** to select students to share one of their subtraction problems and how they solved it.



STUDENTS DO: Selected students share their work and explain their thinking. Seated students observe quietly.

TEACHER SAY: You did a great job today. You are getting very good at solving problems and explaining your thinking using math words.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to subtract within 10. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Large poster of the math journal page for Lesson 114 Sets of 10 counters (one set per pair of students) Number line 0 to 10 (one per pair of students) Subtraction Spinners (one set per pair of students) Paper clips (one per pair of students) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a large poster of the math journal page for Lesson 114. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today we are going to do a student's choice Movement Math again. I will pull a **Calling Stick**. If I call your name, you can pick what kind of Movement Math we do and help me lead it.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student chooses Movement Math and helps the teacher lead it.

TEACHER SAY: Great work, friends. Let's thank our helper and sit down.



STUDENTS DO: Thank helper and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Raise your hand if you can remind us what it means to subtract and how you do it.



STUDENTS DO: Raise hands to volunteer. Selected students share their explanations for how to subtract.

TEACHER SAY: You are getting very good at explaining subtraction. You are going to practice subtraction again today just as you did in our last math lesson. You will play Spin and Subtract with a partner again.

TEACHER DO: Display the poster you created that looks like the math journal page for **Lesson 114**.

TEACHER SAY: Raise your hand if you remember how to play Spin and Subtract.



STUDENTS DO: Raise hands to volunteer. Selected students explain how to play the game.

TEACHER SAY: Very good. Let's play once together. I will use the **Calling Sticks** to select a helper.

TEACHER DO: Pull one **Calling Stick**.



STUDENTS DO: Selected student goes to the front of the room.

TEACHER SAY: _____ (Helper's name), spin the dot spinner, count the dots aloud, and write the first number in the first square next to the balloon picture.



STUDENTS DO: Helper spins the dot spinner, counts the dots aloud, and records the first number.

TEACHER SAY: Spin the number spinner and write the number in the second square.



STUDENTS DO: Helper spins the number spinner and records the second number.

TEACHER SAY: Now we need to subtract. Friends who are sitting, see if you can figure out the answer, but do not say it aloud. _____ (Helper's name), what strategy would you like to use—counters, fingers, number line, counting on, or mental math?



STUDENTS DO: Helper selects a strategy, solves the problem, and records the answer in the circle.

TEACHER SAY: Raise your hand if you got the same answer.



STUDENTS DO: Raise hands if they got the same answer.

TEACHER SAY: Great job, _____ (helper's name). Let's clap for our helper as they go back to their seat.



STUDENTS DO: Helper returns to seat. Seated students clap.

TEACHER SAY: Let's work with some different partners today. Please **Hands Up, Pair Up**.



STUDENTS DO: Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause.) Pair Up.



STUDENTS DO: Clap hands and stand together with a nearby student.

TEACHER SAY: Find a seat with your partner. I will hand out the materials. As soon as you get your materials, you may begin playing.



TEACHER DO: Hold up both spinners and review how to use them to play the game. Hand out math journals and have students open them to the page for **Lesson 114**. Hand out spinners, paper clips, counters, and number lines.



STUDENTS DO: Open math journals to the page for **Lesson 114**. Play Spin and Subtract with their partners.

TEACHER DO: Walk around and observe students as they work. Help students as needed. Ask questions to check their understanding. Have students keep their journals open for Share.



Share (5-10 minutes)

Directions

1. TEACHER DO: Pull **Calling Sticks** to select students to share one of their subtraction problems and how they solved it.



STUDENTS DO: Selected students share their work and explain their thinking. Seated students observe quietly.

TEACHER SAY: You did an even better job today than you did yesterday. I enjoy hearing you explain your thinking using math words.

OUTCOMES	KEY VOCABULARY	MATERIALS
Students will: <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to subtract within 10. 	<ul style="list-style-type: none"> No new vocabulary. Review vocabulary as needed. 	<ul style="list-style-type: none"> Calendar Math Area Sets of 10 counters (one set per group of students) Large poster of the math journal page for Lesson 115 Paper tent (one per small group) Math journal and pencil
LESSON PREPARATION		
<ul style="list-style-type: none"> Create a poster that looks like the math journal page for Lesson 115. Create a paper tent for each pair of students. (See Chapter Preparation for the Teacher for instructions.) 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today, we are going to practice counting while hopping. We will hop backward and count backward starting at 10. Then we will hop forward and count forward.

TEACHER DO: Model hopping backward while counting down from 10, then forward.

TEACHER SAY: Everyone please stand. Hop and count backward with me.



STUDENTS DO: Count aloud and hop backward from 10 to 0 then forward from 1 to 10 with teacher.

TEACHER SAY: Nice hopping and counting. Give your **Shoulder Partner** a high five, then, have a seat.



STUDENTS DO: Give **Shoulder Partner** high five and sit.



Learn (25-30 minutes)

Directions

Note to the Teacher: Students played the Cave Game in Lesson 98. Review if needed. In this version, students are asked to write an equation as well as act out the story.



1. TEACHER DO: Hand out math journals. Have students open them to the page for **Lesson 115**.



STUDENTS DO: Open math journals to the page for **Lesson 115**.

TEACHER SAY: Today, we will play the Cave Game and will practice writing number sentences.

TEACHER DO: Display 10 counters.

TEACHER SAY: These are the bears that live in the cave. Say hello to the bears.



STUDENTS DO: Respond together: Hello, bears.

TEACHER DO: Display a cardstock tent.

TEACHER SAY: This is the cozy cave the 10 bears live in. How many bears live in this cozy cave?



STUDENTS DO: Respond together: 10.

TEACHER SAY: I will pull a **Calling Stick** and ask a student helper to play the Cave Game with me.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student goes to the front of the room.

TEACHER SAY: You will have 10 bears and a cave.

TEACHER DO: Give student helper a paper tent and 10 counters.

TEACHER SAY: _____ (Helper's name) will be the bear handler first. There are 10 bears in the cave. Some leave and play outside the cave. I will close my eyes and _____ (helper's name) will take away some bears and let them play outside. Tell me when I can open my eyes.

TEACHER DO: Closes eyes.



STUDENTS DO: Helper puts some counters outside the tent while the class observes, then tells the teacher to open their eyes.

TEACHER DO: Open eyes.

TEACHER SAY: _____ (Helper's name), ask me how many bears are playing outside the cave.



STUDENTS DO: Helper asks the teacher how many bears are playing outside the cave.

TEACHER SAY: I will count the bears.

TEACHER DO: Count aloud the bears outside the cave.



STUDENTS DO: Count aloud with the teacher.

TEACHER SAY: _____ (Helper's name), ask me how many bears are still in the cave.



STUDENTS DO: Helper asks the teacher how many bears are still in the cave.

TEACHER DO: **Think Aloud** by modeling a thinking face.

TEACHER SAY: I know there are 10 bears that live in the cave, so there are 10 bears all together. I counted _____ (number of counters outside the tent) bears playing outside. They left the cave, so I take them away from the total.

TEACHER DO: Model using counters to subtract. Announce the answer.

TEACHER SAY: I think there are _____ (answer) bears inside the cave.



STUDENTS DO: Helper lifts the cave and counts the bears to check the teacher's answer.

TEACHER SAY: Fabulous. Now we work together to make a number sentence. How many bears did we start with?



STUDENTS DO: Respond together: 10.

TEACHER SAY: Write 10 in the first box in your math journal next to the puzzle piece picture. _____ (Helper's name) will write 10 in the first box on the board.



STUDENTS DO: Write 10 in the first box in their math journals. Helper writes 10 on the poster.

TEACHER SAY: We already have a minus sign. Now we have to write how many bears left the cave and went to play outside. How many bears left the cave?



STUDENTS DO: Respond together: _____ (number of counters outside the paper tent).

TEACHER SAY: Write _____ (number of counters outside the paper tent) in the second box in your math journal. _____ (Helper's name) will write that number in the second box on the board.



STUDENTS DO: Write _____ (number of counters outside the paper tent). Helper writes the number in the second box on the poster.

TEACHER SAY: Point to the equal sign on the number sentence frame.



STUDENTS DO: Point to the equal sign in their journals.

TEACHER SAY: Now, _____ (helper's name) will write the answer in the circle. You write the answer in the circle in your math journal.



STUDENTS DO: Write the answer in their journals. Helper writes the answer on the poster.

TEACHER SAY: Now it is your turn to play Cave Game with a partner. Take turns hiding the bears. We will **Hands Up, Pair Up** to find a partner.



STUDENTS DO: Walk around the room quietly with one hand raised in the air.

TEACHER SAY: Stop. (Pause.) Pair Up.



STUDENTS DO: Clap hands and stand together with a nearby student.

TEACHER DO: Hand out sets of counters and paper tents to pairs of students.



STUDENTS DO: Play Cave Game at least three times and write number sentences in their math journal, **Lesson 115**.

TEACHER DO: Walk around and observe students as they work. Offer help as needed. Correct misconceptions and errors. At the end of the Learn segment, use an **Attention Getting Signal**.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Superb work. I would like to hear your thinking about writing addition and subtraction. We have learned about both. How are addition and subtraction alike? How are they different? Think quietly for a moment. Raise your hand when you are ready to share your thinking.



STUDENTS DO: Think quietly for a moment. Raise hands when ready to share. Selected students share their thinking.

TEACHER DO: Take note of students' thinking. Identify students who have a good understanding of the similarities and differences and students who may need additional instruction and practice.

TEACHER SAY: Thank you for sharing your thinking. It is very helpful for us to hear each other's thinking about math.

OUTCOMES	KEY VOCABULARY	MATERIALS
<p>Students will:</p> <ul style="list-style-type: none"> Participate in Calendar Math activities. Apply strategies to add within 10. Illustrate an addition problem. 	<ul style="list-style-type: none"> Number sentence 	<ul style="list-style-type: none"> Calendar Math Area Math journal and pencil Ball One large tree for demonstration Six trees made of construction paper or cardboard Cut-out circles (pomegranates) Crayons Tape or glue Poster of six addition sentence frames
LESSON PREPARATION		
<ul style="list-style-type: none"> Create one large tree using construction paper or cardboard. Print and cut out 10 large circles to represent pomegranates. Color five red and five yellow. Prior to the lesson, tape four red pomegranates (circles) and one yellow pomegranate (circle) to the large tree. Create one tree (about 40 cm tall) for each small group of students. Print and cut out pomegranates for students to color (two pomegranates per student). Create a poster with six addition sentence frames. Have a ball for Movement Math. 		



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER DO: Prepare for Movement Math with a ball.

TEACHER SAY: It is time for Movement Math. Today we will play Catch and Count. We will count backward. I will point to a student and say 10. That student must stand, catch the ball, and then point at a classmate and say 9. That student must stand and catch the ball. We will count back until we reach 0. Then, we start counting again from 1 to 10. The game repeats until everyone is standing. Make sure you have space around you.

TEACHER DO: Point to a student to stand. Toss the ball and say 10.



STUDENTS DO: Catch and count until 0, then repeat counting forward and backward until everyone is standing.

TEACHER SAY: Great counting back and forth. Please have a seat.



STUDENTS DO: Sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today we will make a math orchard. Our addition tree will be a pomegranate tree. Each tree will have 5 pomegranates. What color is a pomegranate?



STUDENTS DO: Respond together: Red.

TEACHER SAY: A pomegranate that is ripe and ready to eat is red. Before it is ready to eat, it is yellow.

TEACHER DO: Display the tree with 4 red pomegranates and 1 yellow pomegranate.

TEACHER SAY: There are 5 pomegranates on this tree. Count them with me.



STUDENTS DO: Count aloud to 5 with teacher.

TEACHER SAY: One pomegranate on this tree is not ripe. It is not ready to eat. Point to that pomegranate.



STUDENTS DO: Point to the yellow pomegranate.

TEACHER SAY: What color is the pomegranate that is not ripe?



STUDENTS DO: Respond together: Yellow.

TEACHER SAY: I will use this pomegranate tree to write a number sentence.

TEACHER DO: Display the poster of number sentence frames.

TEACHER SAY: We have used number sentences before. Point to the plus sign.



STUDENTS DO: Point to the plus sign.

TEACHER SAY: Point to the equal sign.



STUDENTS DO: Point to the equal sign.

TEACHER SAY: What shape does the total go in?



STUDENTS DO: Respond together: Circle.

TEACHER SAY: Good. The numbers we are adding will go inside the squares. How many ripe, red pomegranates do you see?



STUDENTS DO: Respond together: 4.

TEACHER SAY: I will write 4 in the first square.

TEACHER DO: Write 4 in square.

TEACHER SAY: How many unripe, yellow pomegranates do you see?



STUDENTS DO: Respond together: 1.

TEACHER SAY: I will write 1 in the next square.

TEACHER DO: Write 1 in square.

TEACHER SAY: How many pomegranates do we have altogether?

 **STUDENTS DO:** Respond together: 5.


TEACHER DO: Write 5 in the circle.

TEACHER SAY: 4 plus 1 equals 5. Read the number sentence with me. 4 plus 1 equals 5.


 **STUDENTS DO:** Respond together: 4 plus 1 equals 5.

TEACHER SAY: This is the number sentence that matches our tree. I will give each of you two pomegranates. You will make one red and ripe. You will make the other one unripe and yellow. Then we will add them to the trees and you will help me write a number sentence to match.


TEACHER DO: Divide students into groups of five. Give each small group a tree, crayons, and tape or glue. Give each student two pomegranates (circles).


 **STUDENTS DO:** Color one circle red and one circle yellow.

TEACHER SAY: I want you to work with your group to put some pomegranates on your tree. You do not have to use all of your pomegranates. You must decide together how many pomegranates your tree will have. You can use any combination of red and yellow pomegranates you choose.

 **STUDENTS DO:** Talk to each other and decide how many pomegranates they will attach to their tree and how many will be ripe and unripe. Attach pomegranates to their trees.

TEACHER DO: Supervise students as they attach the pomegranates to the trees. As students work, hand out math journals. When students are finished working, use an **Attention Getting Signal**.


 **TEACHER SAY:** Open your math journals to the page for Lesson 116.

 **STUDENTS DO:** Open math journals to the page for Lesson 116.

TEACHER SAY: You are going to write an addition sentence that matches your tree, just as I did. Watch me.


TEACHER DO: Attach 5 red circles and 3 yellow circles to the large tree.

TEACHER SAY: Look at my tree. What addition sentence could I write to go with my tree? Think quietly for a moment about the number of red pomegranates, the number of yellow pomegranates, and the total number of pomegranates. Raise your hand when you are ready.

 **STUDENTS DO:** Think quietly about what addition sentence they could write. Raise hands when they are ready. Selected students share their answers.

TEACHER DO: Write students' addition sentences on the board. If students do not mention it, explain that there are two possible addition sentences that can be created (red + yellow and yellow + red).

TEACHER SAY: Now, work with your group and figure out the addition sentence for your tree. Write it in your journals. Then, draw a picture of your tree in your journal.

 **STUDENTS DO:** Work with each other to figure out an addition sentence that goes with their pomegranate tree. Write their equation in their math journals, then draw a picture of their group's tree.

TEACHER DO: Walk around and observe students as they talk and work. Offer help as needed. Correct any errors or misconceptions. Have students keep their journals out for Share.



Share (5-10 minutes)

Directions

1. **TEACHER SAY:** Wonderful work. Let's do a **Gallery Walk** to look at each other's work.



STUDENTS DO: Take a **Gallery Walk**.

TEACHER DO: Ask questions during the **Gallery Walk**. Praise work. Check for understanding by asking students to explain their number sentences and drawings.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply strategies to subtract within 10.
- Illustrate a subtraction problem.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Math journal and pencil
- Tree on poster paper
- Five purple circles
- Poster of four subtraction sentence frames
- Tape

LESSON PREPARATION

- Create a tree with five small, purple circles that can be moved. (See Chapter Preparation for the Teacher for details.)
- Create a poster of four subtraction sentence frames.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: Today, we are going to jump up and count backward from 10 to 0. I will show you by jumping and counting first. Then we will do it together.

TEACHER DO: Model the jumping and counting movement. Count with each jump until you reach 0.

TEACHER SAY: Now it is your turn. Everyone, stand. Let's jump and count together. We will count backward three times.



STUDENTS DO: Jump and count backward from 10 to 0 three times with the teacher.

TEACHER SAY: Amazing jumping and counting backward. Give your **Shoulder Partner** a high five and have a seat.



STUDENTS DO: Give **Shoulder Partner** a high five and sit.



Learn (25-30 minutes)

Directions

1. TEACHER DO: Display plum tree with plums.

TEACHER SAY: Yesterday we created an orchard with addition pomegranate trees. Today we will use this plum tree to write subtraction sentences. These plums are all ripe. Raise a hand if you remember what ripe means?



STUDENTS DO: Raise hands to share. Selected students share their thinking.

TEACHER SAY: Ripe means it is ready to eat. When a plum is ripe it is a purple color. All of our plums are ripe. What color are all of our plums?

 **STUDENTS DO:** Respond together: Purple.


TEACHER SAY: Help me count all of these ripe plums.

 **STUDENTS DO:** Count aloud to 5 with the teacher.

TEACHER SAY: When fruit is ripe it sometimes falls to the ground. Our plum tree must be getting ripe because some fruit is falling to the ground.

TEACHER DO: Move 1 plum to the ground.

TEACHER SAY: One plum was so ripe it fell out of the tree and onto the ground. Is this a subtraction or addition story? Are we taking some things away or putting some things together? Think quietly for a moment and give me a **Thumbs Up** when you think you know. If I call on you, I want you to explain your thinking.

 **STUDENTS DO:** Think quietly, then give a **Thumbs Up** when they are ready to answer. Selected students answer the question and explain how they know.

TEACHER SAY: We are taking some of the fruit away from the tree, so this is a subtraction problem.

TEACHER DO: Display poster with four subtraction sentence frames.

TEACHER SAY: Help me write a subtraction sentence for this problem. Raise your hand if you know what I should write first and can tell me how you know.

 **STUDENTS DO:** Raise hands to volunteer. Selected students answer and explain their thinking.

TEACHER SAY: When we write a subtraction problem, our number sentence begins with the total number of things we have at the start. How many plums did we start with?

 **STUDENTS DO:** Respond together: 5.

TEACHER SAY: Yes, five. So, our problem starts with 5.

TEACHER DO: Write 5 in the first square.

TEACHER SAY: Our tree had 5 plums all together, so, I wrote the number 5 in the first square. How many plums fell out of the tree?

 **STUDENTS DO:** Respond together: 1.

TEACHER SAY: Our tree lost 1 plum, so I write 1 in the second square.


TEACHER DO: Write 1 in the second square.

TEACHER SAY: We started with 5 plums and we subtracted 1. How many plums are still in the tree? Let's count together.

 **STUDENTS DO:** Count aloud to 4 with the teacher.

TEACHER DO: Write 4 in the circle.

TEACHER SAY: Let's read the subtraction sentence that matches our plum tree story.


 **STUDENTS DO:** Read aloud with the teacher: 5 minus 1 equals 4.

TEACHER DO: Move all 5 plums back to the tree.

TEACHER SAY: Excellent subtraction. More plums are ripening and now 2 plums have fallen out of the tree and onto the ground.

TEACHER DO: Move 2 plums from the tree to the ground.

TEACHER SAY: Raise your hand if you think you know what to write for a number sentence.


 **STUDENTS DO:** Raise hands if they think they can write a subtraction sentence for the new problem.

TEACHER SAY: I will pull **Calling Sticks** and have student helpers assist me in writing a number sentence.

TEACHER DO: Pull a **Calling Stick**.

 **STUDENTS DO:** Selected student goes to the front of the room.


TEACHER SAY: _____ (Helper's name), what should we write in the first square? How do you know?

 **STUDENTS DO:** Helper answers the question. If the student needs help, they can ask friends for help. Helper writes 5 in the first square on the poster. Helper sits.

TEACHER DO: Pull another **Calling Stick**.

 **STUDENTS DO:** Selected student goes to the front of the room.


TEACHER SAY: _____ (Helper's name), what should we write in the second square? How do you know?

 **STUDENTS DO:** Helper answers the question. If the student needs help, they can ask friends for help. Helper writes 2 in the second square on the poster. Helper sits.


TEACHER DO: Pull another **Calling Stick**.

 **STUDENTS DO:** Selected student goes to the front of the room.

TEACHER SAY: _____ (Helper's name), what should I write in the circle? How do you know?


 **STUDENTS DO:** Helper answers the question. If the student needs help, they can ask friends for help. Helper writes 3 in the circle on the poster. Helper sits.

TEACHER SAY: Let's read the subtraction sentence that matches this plum tree.

 **STUDENTS DO:** Read aloud with the teacher: 5 minus 2 equals 3.

2. TEACHER SAY: We are going to do one more. This time, you will write the subtraction sentence in your math journal. Then, you will draw a picture of the tree.

 **TEACHER DO:** Hand out math journals. Have students open them to the page for **Lesson 117**.

 **STUDENTS DO:** Open math journals to the page for **Lesson 117**.

TEACHER DO: Put all 5 plums back on the tree. Make sure all students are watching, then move 3 plums to the ground.

TEACHER SAY: Write the subtraction sentence for this plum tree in your math journal. Then, draw a picture of the tree.

 **STUDENTS DO:** Write the subtraction sentence that matches the plum tree, then draw a picture of the tree.

TEACHER DO: As students are working, walk around and observe their progress. Ask questions to assess their understanding. Clear up misconceptions and help students correct errors.



Share (5-10 minutes)

Directions

1. TEACHER SAY: Fine work. Please share your work with your **Shoulder Partner**. Show them your plum tree and have them show you what happened to their plum tree.

TEACHER DO: Give students time to share, then use an **Attention Getting Signal**.

TEACHER SAY: Raise your hand if you would like to share your work and can explain how you knew what to write for your subtraction sentence.



STUDENTS DO: Raise hands to volunteer. Selected students share their work and explain their thinking.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply skills and concepts to play math games.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Game materials

LESSON PREPARATION

- Gather materials for games and activities students have played throughout the school year. (See Chapter Preparation for the Teacher for instructions and details.)
- Arrange games and activities around the room. Students will move with partners/groups to play the games and activities.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: It is time for Movement Math. We will count backward from 10 down to 1. Stand up and make sure you have room to move.



STUDENTS DO: Stand up.

TEACHER DO: Be sure to provide enough time for all students to complete each direction before moving on to the next one.

TEACHER SAY:

- Blow 10 tiny bubbles and let them float away.
- Bend your knees 9 times.
- Tiptoe 8 times.
- Stomp your feet 7 times.
- Hop 6 times.
- Wave your arms 5 times.
- Do 4 jumping jacks.
- Touch your toes 3 times.
- Put your arms up 2 times.
- Twirl around 1 time. Then have a seat.



STUDENTS DO: Follow each direction by doing each movement the correct number of times.

TEACHER SAY: Very good moving and counting. Give your **Shoulder Partner** a handshake, then have a seat.



STUDENTS DO: Give **Shoulder Partner** a handshake and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: We are getting very close to the end of the school year. You have learned so much about mathematics. Today—and for the next two days—we will celebrate our learning by playing the math games and activities we have played throughout the school year. You will be able to play different games over the next three lessons, so do not worry if you do not get to play the game you want to play today. First, I will tell you your choices.

TEACHER DO: Show students where the games and activities are located. Review the names and briefly describe how to play.

- Jump Up: **Lesson 6**
- 1, 2, 3, Move: **Lesson 6**
- Counting Game: **Lesson 12**
- Catch and Count: **Lesson 30**
- Pattern Game: **Lesson 33**
- Dot Card Game: **Lesson 49**
- Trash or Treasure: **Lesson 71**
- Cup Game: **Lesson 72**
- Pom Pom Race: **Lesson 73**
- Red and Green: **Lesson 80**
- Number Relay Race: **Lesson 81**
- Greater Than Game: **Lesson 96**
- Slaps: **Lesson 97**
- Cave Game: **Lesson 98**
- Guessing Game: **Lesson 99**
- Stick Puppet **Role Play: Lesson 101**
- Make 5: **Lesson 103**
- Add the Dots: **Lesson 105**
- Spin and Subtract: **Lesson 113**

TEACHER SAY: Raise your hand if you have questions.



STUDENTS DO: Raise hands to ask questions, if necessary.

TEACHER SAY: You have two minutes to move to a game or activity. If someone else is playing the game you want to play, do not worry. We will rotate in about 10 minutes.



STUDENTS DO: Play games with classmates. Rotate to new games when the teacher gives the signal.

TEACHER DO: Make sure students understand the procedure for today. Then, allow them to move to the games and activities they want to play. As students play, walk around the room. Observe their work and listen to their conversations. Encourage visiting parents to play games with their children. At the end of the Learn segment, use an **Attention Getting Signal**.



Share (5-10 minutes)

Directions

1. TEACHER SAY: What are your favorite math games or activities? Why are they your favorites? Talk to your **Shoulder Partner** and share your thinking.



STUDENTS DO: Talk to **Shoulder Partners** about favorite math games and activities.

TEACHER DO: Use **Calling Sticks** to select students to share.



STUDENTS DO: Selected students share their thinking.

TEACHER SAY: Thank you for sharing your thinking. I love to hear you talk about math. We will play games again tomorrow and maybe some of you will change your minds about your favorites. Great work today, everyone.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply skills and concepts to play math games

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Game materials

LESSON PREPARATION

- No new preparation needed.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: It is time for Movement Math. Today we will play a game called Clap and Stomp. Watch and listen.

TEACHER DO: Clap once.

TEACHER SAY: How many claps?



STUDENTS DO: Respond together: 1.

TEACHER DO: Stomp once.

TEACHER SAY: How many stomps?



STUDENTS DO: Respond together: 1.

TEACHER SAY: I clapped 1 time. I stomped 1 time. How many claps and stomps altogether? How many movements did I do?



STUDENTS DO: Respond together: 2.

TEACHER SAY: 1 clap and 1 stomp is 2. After I clap and stomp, I will say: 2. Watch.

TEACHER DO: Clap once, stomp once, say 2.

TEACHER SAY: Stand and let's try together.



STUDENTS DO: Stand.

TEACHER SAY: 1 clap, 1 stomp: 2.

TEACHER DO: Clap once, stomp once.



STUDENTS DO: Clap once, stomp once, say 2.

TEACHER SAY: 2 claps and 1 stomp.

TEACHER DO: Clap twice, stomp once, say: 3.

 **STUDENTS DO:** Clap twice, stomp once, say 3.

TEACHER SAY: It looks like you understand how to stomp, clap, and count. Turn to your **Shoulder Partner** and give them a handshake and have a seat.

 **STUDENTS DO:** Give **Shoulder Partner** a handshake then sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: In our last math lesson, we played math games and activities to review and practice many of the math skills we have learned. We will do the same thing today and in our last math lesson. Do you have any questions?

 **STUDENTS DO:** Raise hands to ask questions, if necessary.

TEACHER SAY: You have two minutes to move to a game or activity. If someone else is playing the game you want to play, do not worry. We will rotate in about 10 minutes.

 **STUDENTS DO:** Play games with classmates. Rotate to new games when the teacher gives the signal.

TEACHER DO: Make sure students understand the procedure for today. Then, allow them to move to the games and activities they want to play. As students play, walk around the room. Observe their work and listen to their conversations. Encourage visiting parents to play games with their children. At the end of the Learn segment, use an **Attention Getting Signal**.




Share (5-10 minutes)

Directions

1. TEACHER SAY: If you could make up a new math game, what would it be? I will give you a minute to think.

 **STUDENTS DO:** Think quietly for a moment.

TEACHER SAY: Turn to your **Shoulder Partner** and share your ideas.

 **STUDENTS DO:** Share ideas with **Shoulder Partners**.

TEACHER SAY: Now, I would like to hear your ideas. Give me a **Thumbs Up** if you have an idea you would like to share.

 **STUDENTS DO:** Give a **Thumbs Up** to volunteer. Selected students share their ideas for math games.

TEACHER SAY: Wonderful ideas. Your game ideas show me that you have been very thoughtful about your work during our math lessons. When you are at home over the summer, invent your game and play it with your friends.

OUTCOMES

Students will:

- Participate in Calendar Math activities.
- Apply skills and concepts to play math games.

KEY VOCABULARY

- No new vocabulary. Review vocabulary as needed.

MATERIALS

- Calendar Math Area
- Game materials

LESSON PREPARATION

- No new preparation needed.



Calendar Math and Movement (15-20 minutes)

Directions

1. TEACHER DO: Complete the Calendar Math routine.



STUDENTS DO: Participate in the Calendar Math routine.

2. TEACHER SAY: For our last Movement Math, we are going to do student's choice again. I will pull a **Calling Stick**. If I call your name, you can pick what kind of Movement Math we do and help me lead it.

TEACHER DO: Pull a **Calling Stick**.



STUDENTS DO: Selected student chooses Movement Math and helps the teacher lead it.

TEACHER SAY: Great work, friends. Let's thank our helper and sit down.



STUDENTS DO: Thank helper and sit.



Learn (25-30 minutes)

Directions

1. TEACHER SAY: Today is our last math lesson. I have enjoyed watching you use your math skills to play games and activities together. Today, we will do that for the last time together. Do you have any questions?



STUDENTS DO: Raise hands to ask questions, if necessary.

TEACHER SAY: You have two minutes to move to a game or activity. If someone else is playing the game you want to play, do not worry. We will rotate in about 10 minutes.



STUDENTS DO: Play games with classmates. Rotate to new games when the teacher gives the signal.

TEACHER DO: Make sure students understand the procedure for today. Then, allow them to move to the games and activities they want to play. As students play, walk around the room. Observe their work and listen to their conversations. Encourage visiting parents to play games with their children. At the end of the Learn segment, use an **Attention Getting Signal**.

Share (5-10 minutes)

Directions



1. TEACHER DO: Hand out math journals and crayons. Have students open their journals to the page for **Lesson 120**.



STUDENTS DO: Open math journals to the page for **Lesson 120**.

TEACHER SAY: I have truly enjoyed this school year. You have all learned so much. I see you as mathematicians. For your last math journal entry, I want you to draw a picture of yourself doing math. In your picture, you can be working with shapes, learning about money, solving math problems, measuring things—anything we have learned this year.



STUDENTS DO: Draw pictures of themselves as mathematicians.

TEACHER DO: As students work on their pictures, walk around and ask them to tell you what is happening in the picture. Encourage students to do their best work and to color their pictures carefully.

TEACHER SAY: You will take your math journals home with you today. I hope you will show them to your family and friends. They are a wonderful story of everything you have learned in math this year.

TEACHER DO: If time allows, have students do a **Gallery Walk** to see each other's pictures.



STUDENTS DO: Participate in a **Gallery Walk**.

KINDERGARTEN I

Mathematics

Appendix

Blackline Masters

Data Collection Squares

Greater Than Game Number Cards

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2	2	2	2

3

3

3

3

4

4

4

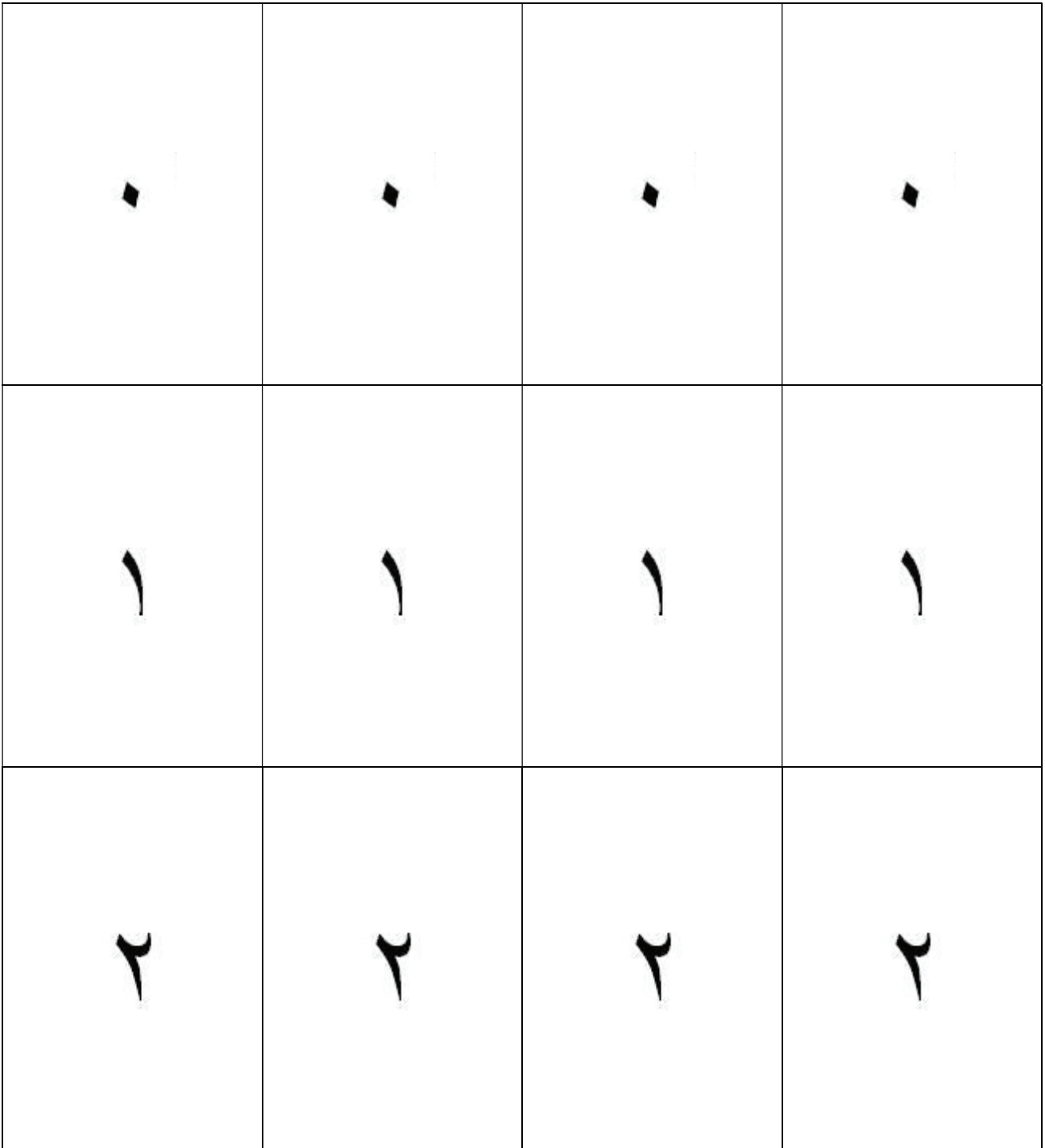
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Notecards for Names

Number Cards for Making Ten

6

1

7

2

8

3

9

4

10

5

5

Ordinal Number Cards 1-10

1st

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2nd

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3rd

third

4th

fourth

5th

fifth

6th

sixth

7th

seventh

8th

eighth

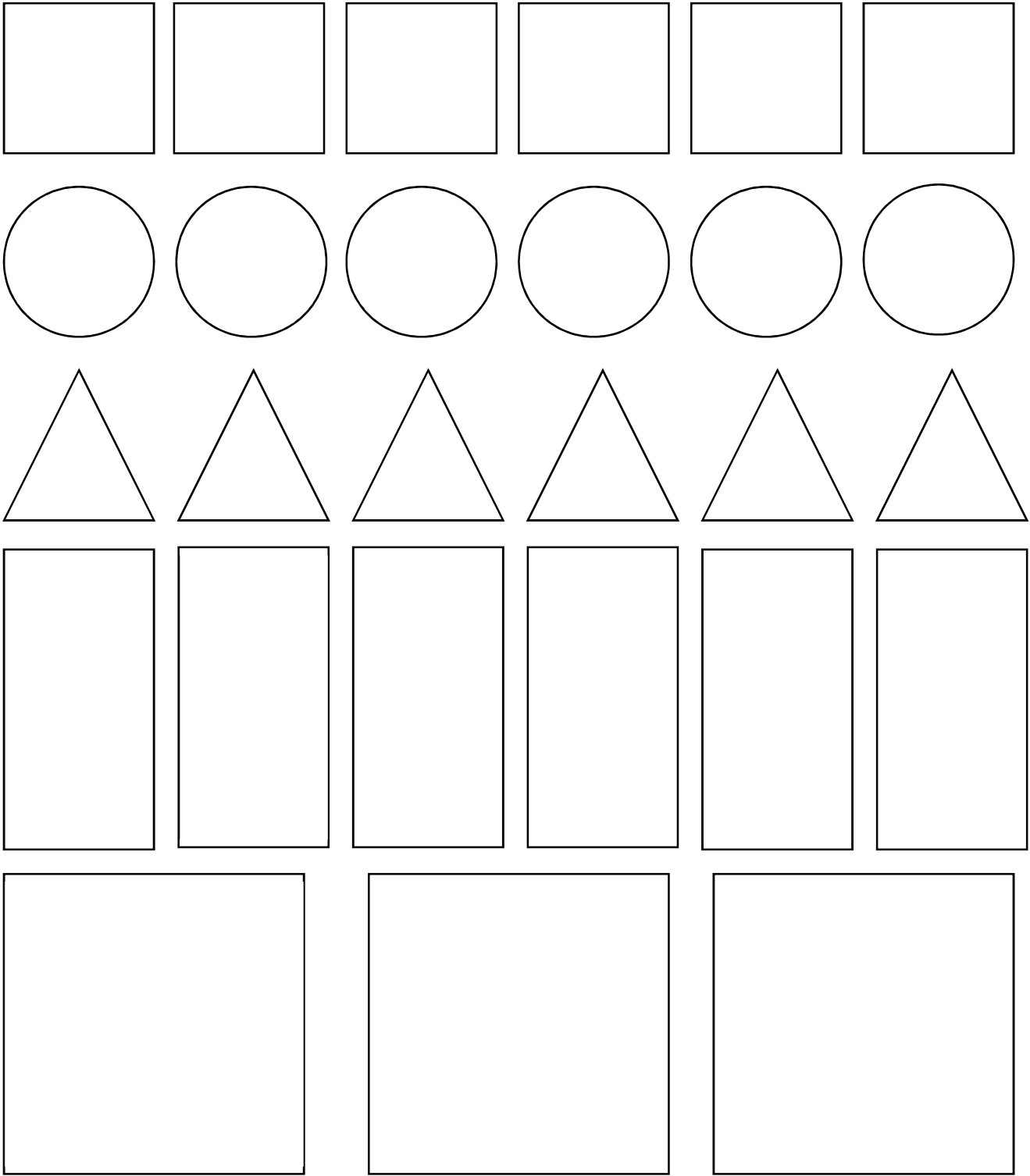
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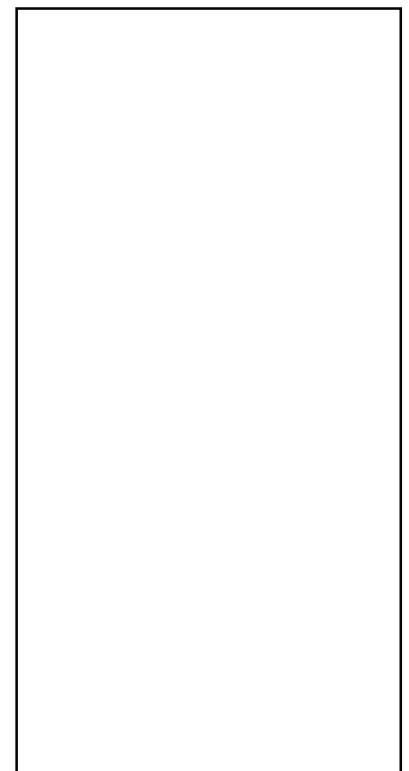
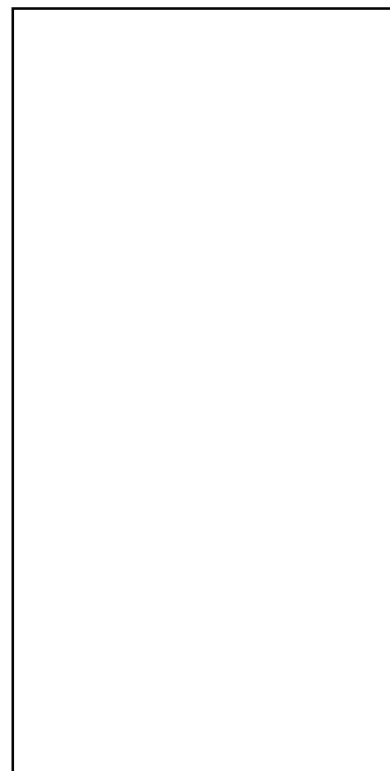
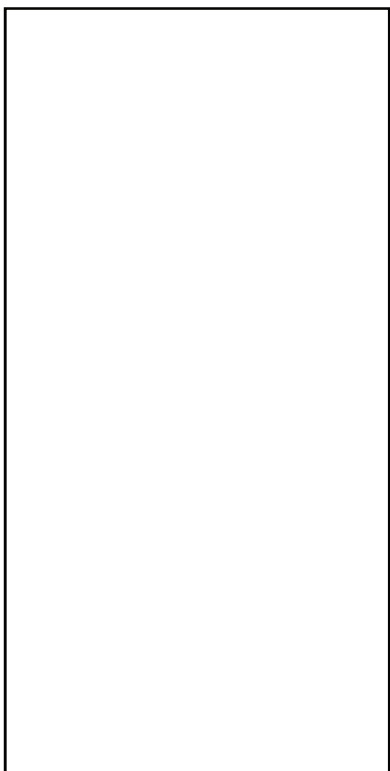
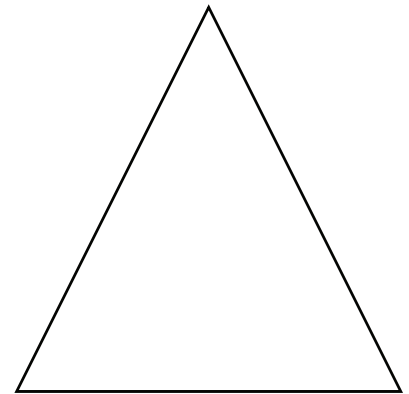
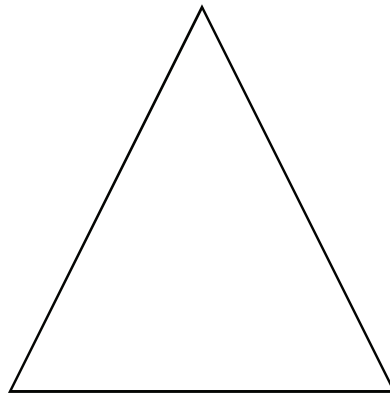
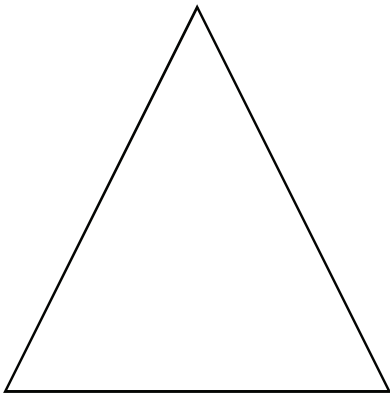
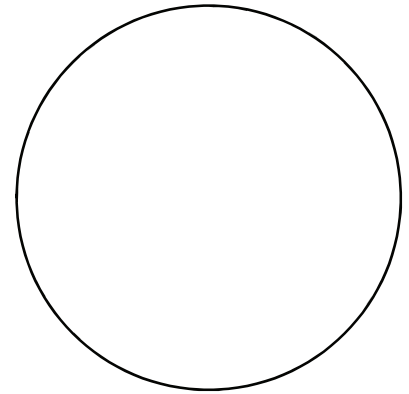
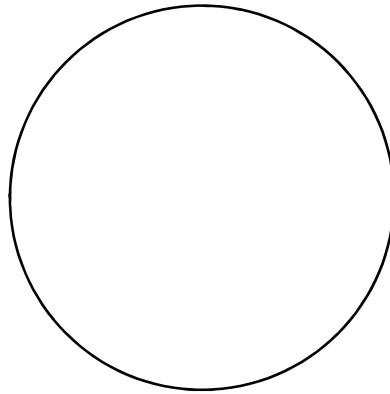
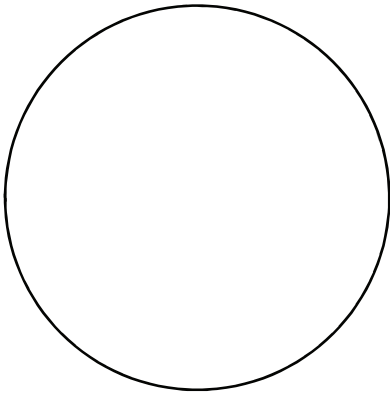
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tenth

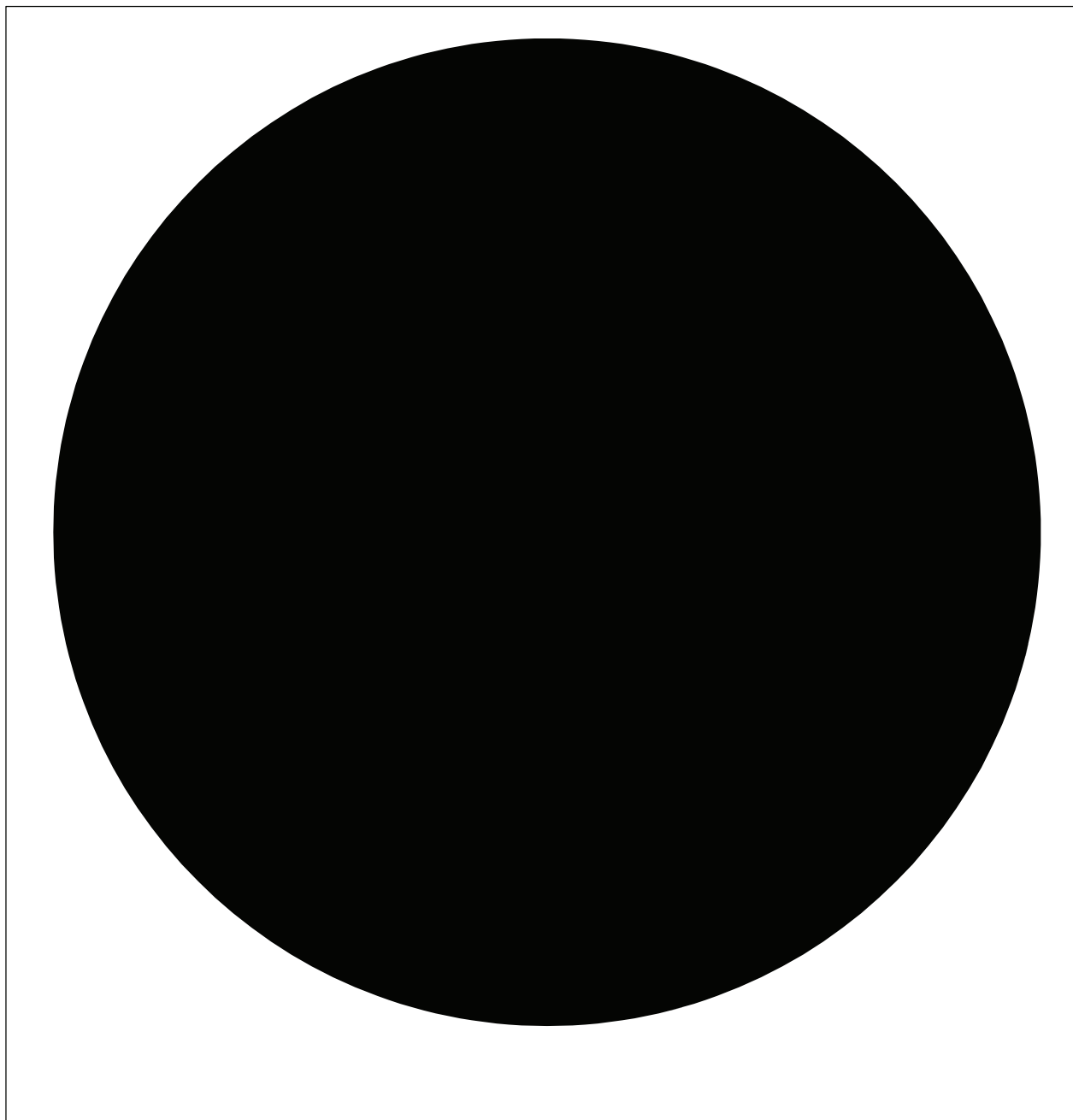
Shape Blocks (Page 1 of 2)



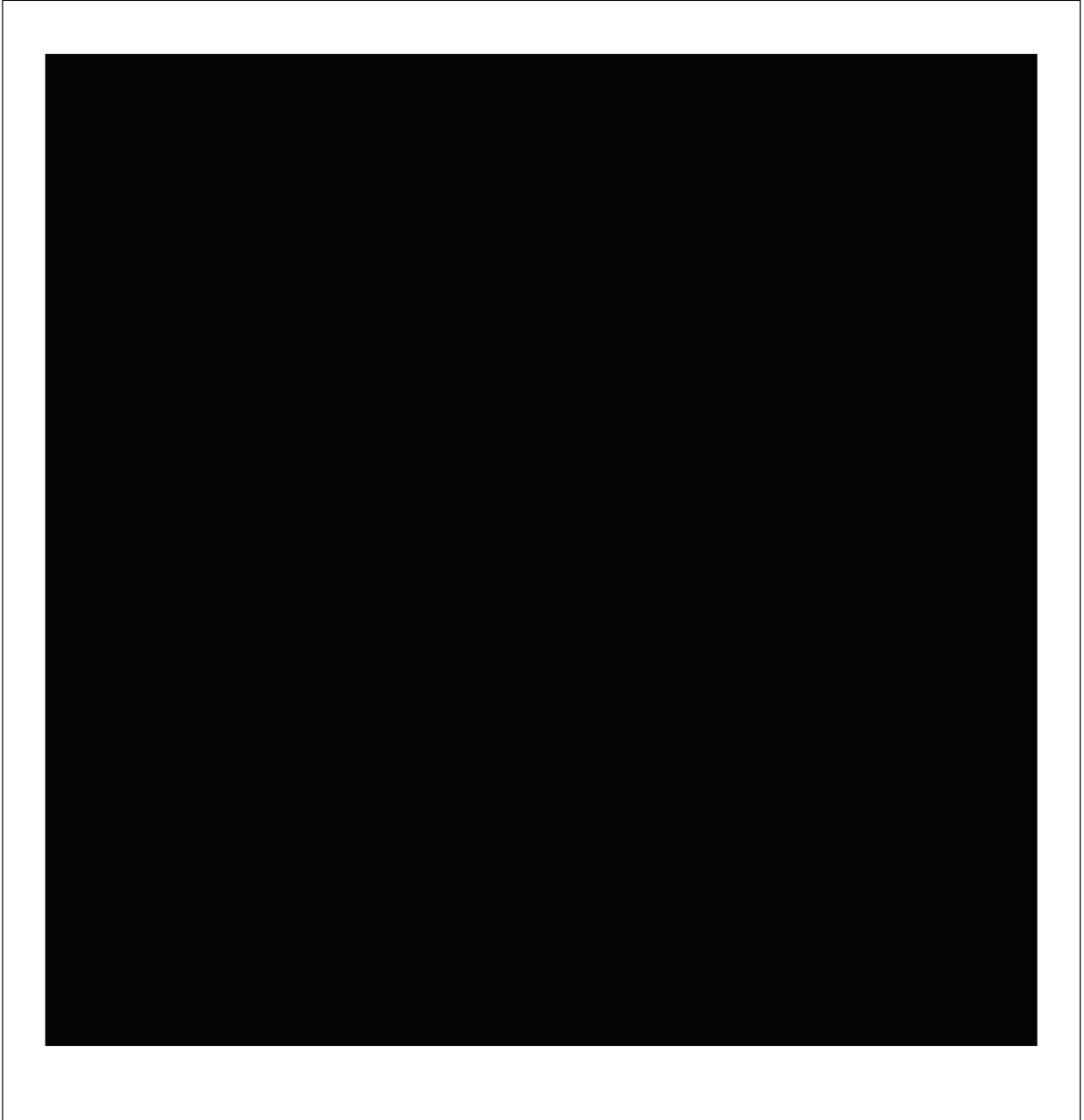
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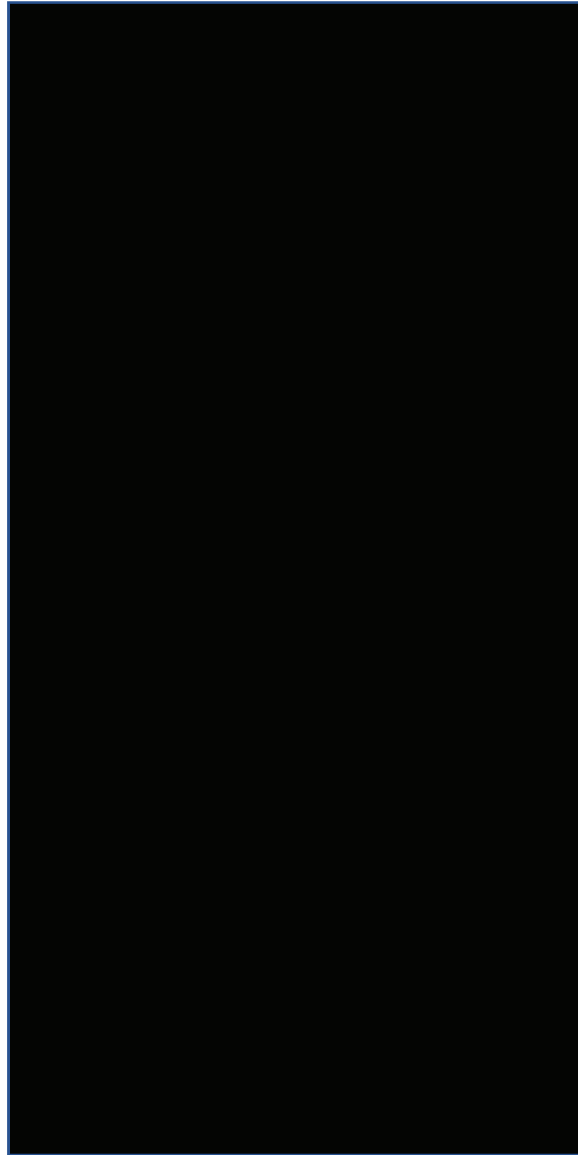
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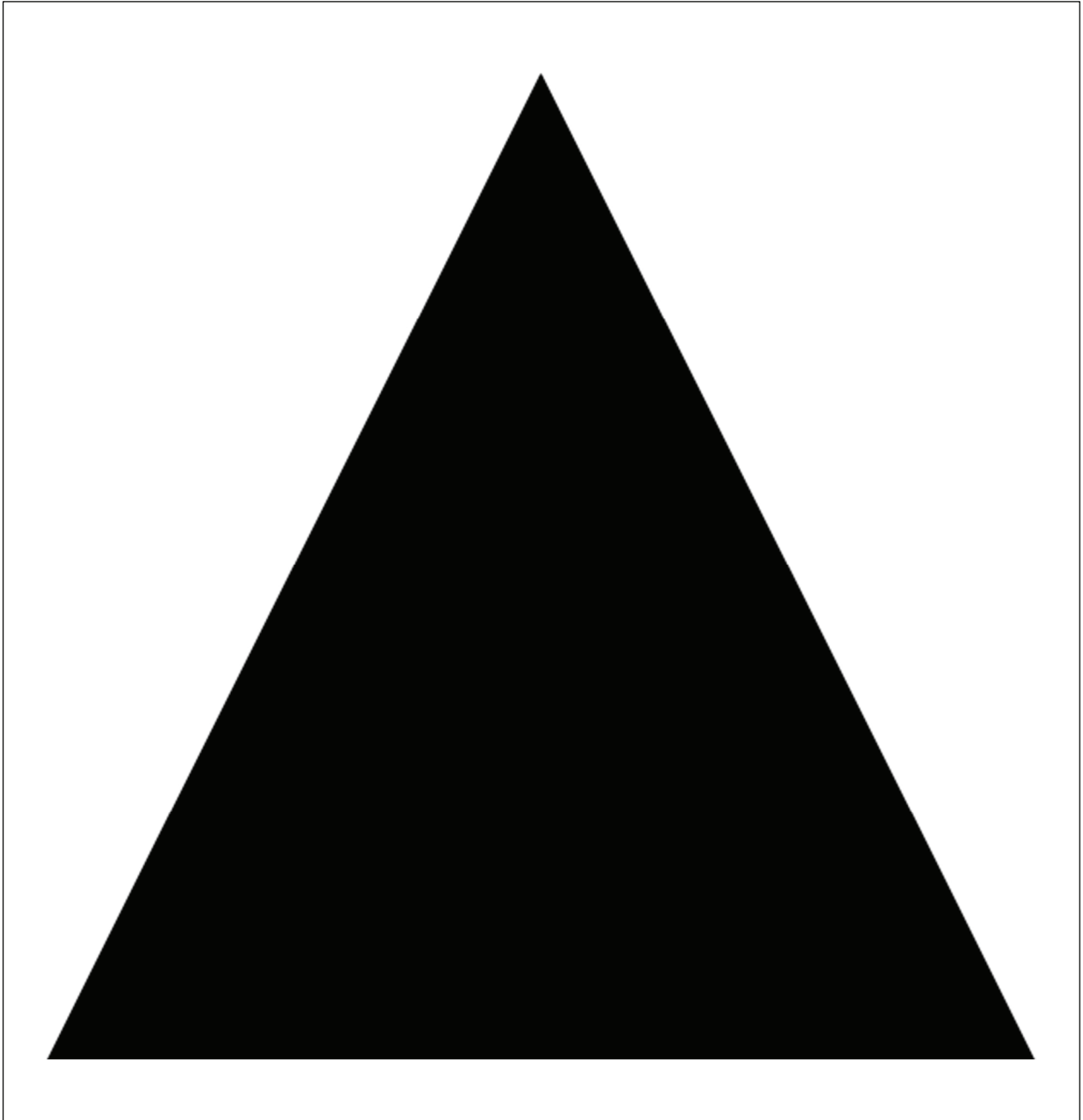
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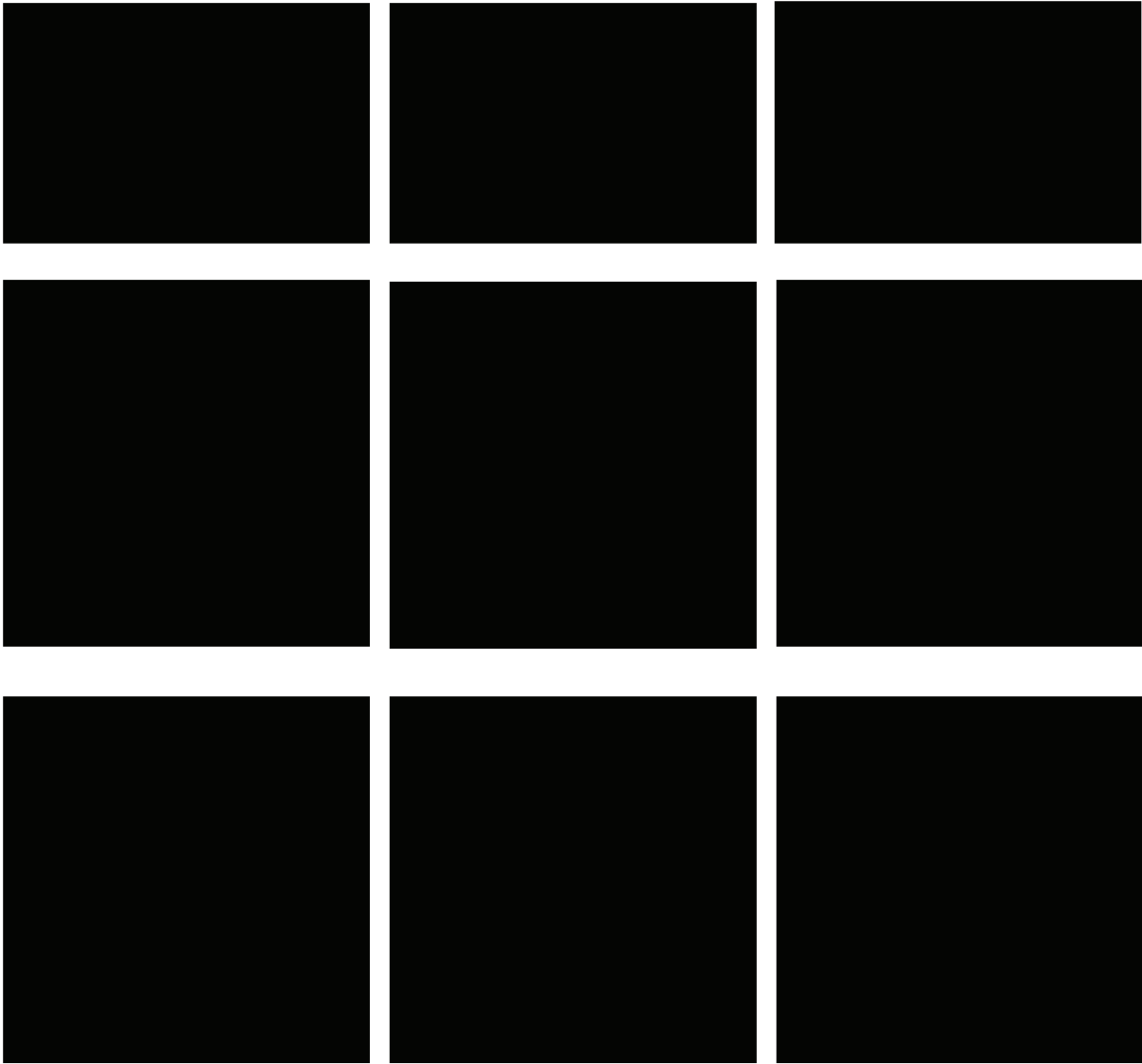
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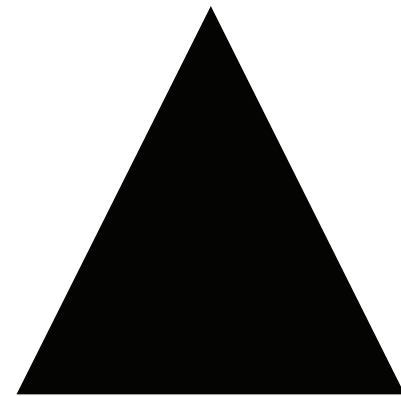
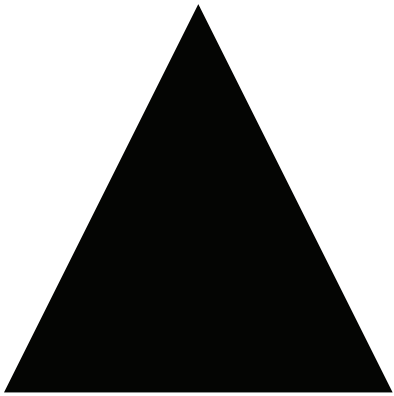
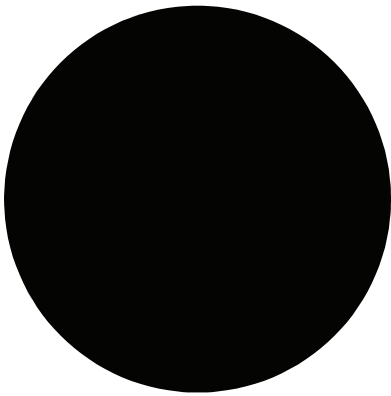
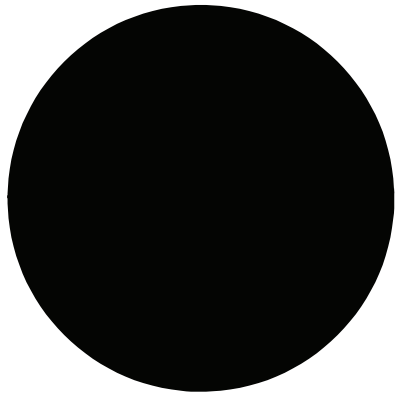
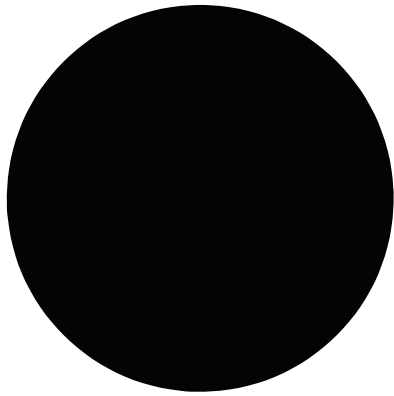
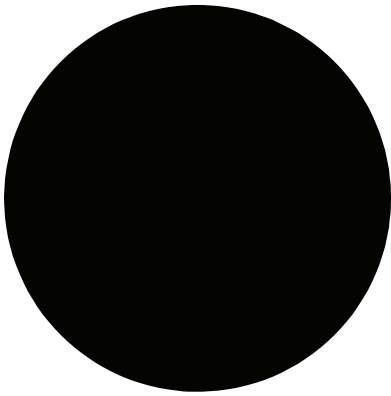


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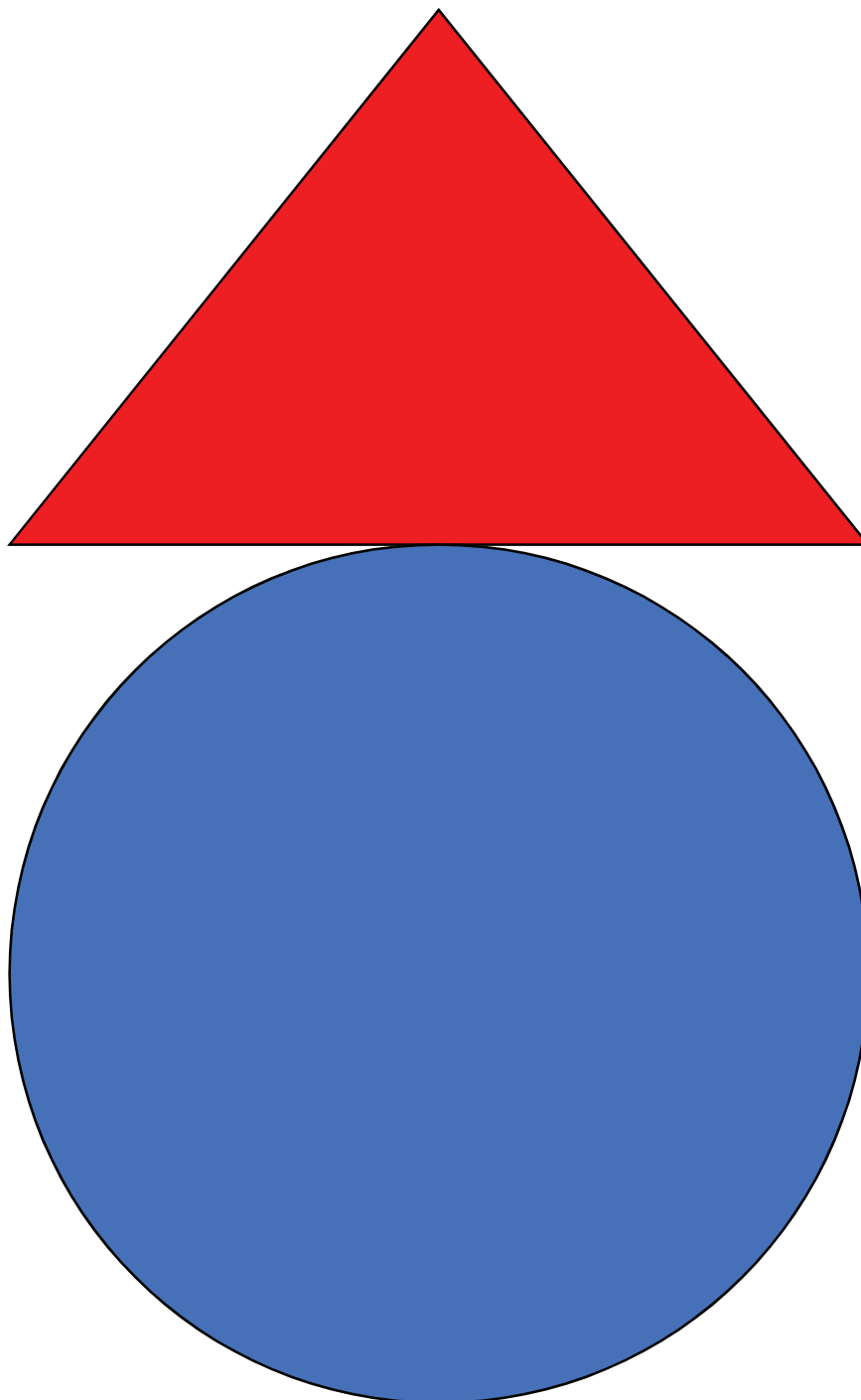


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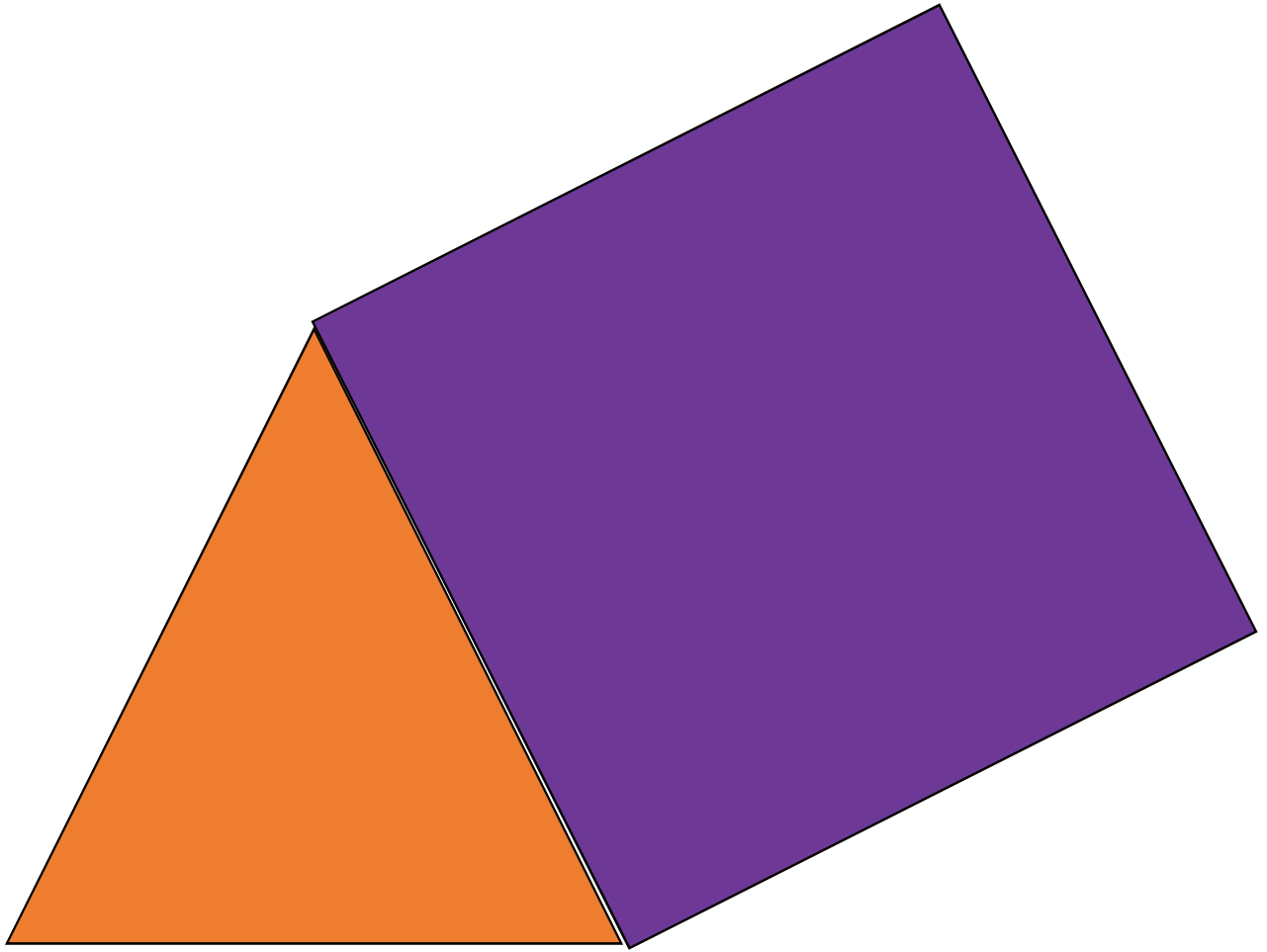




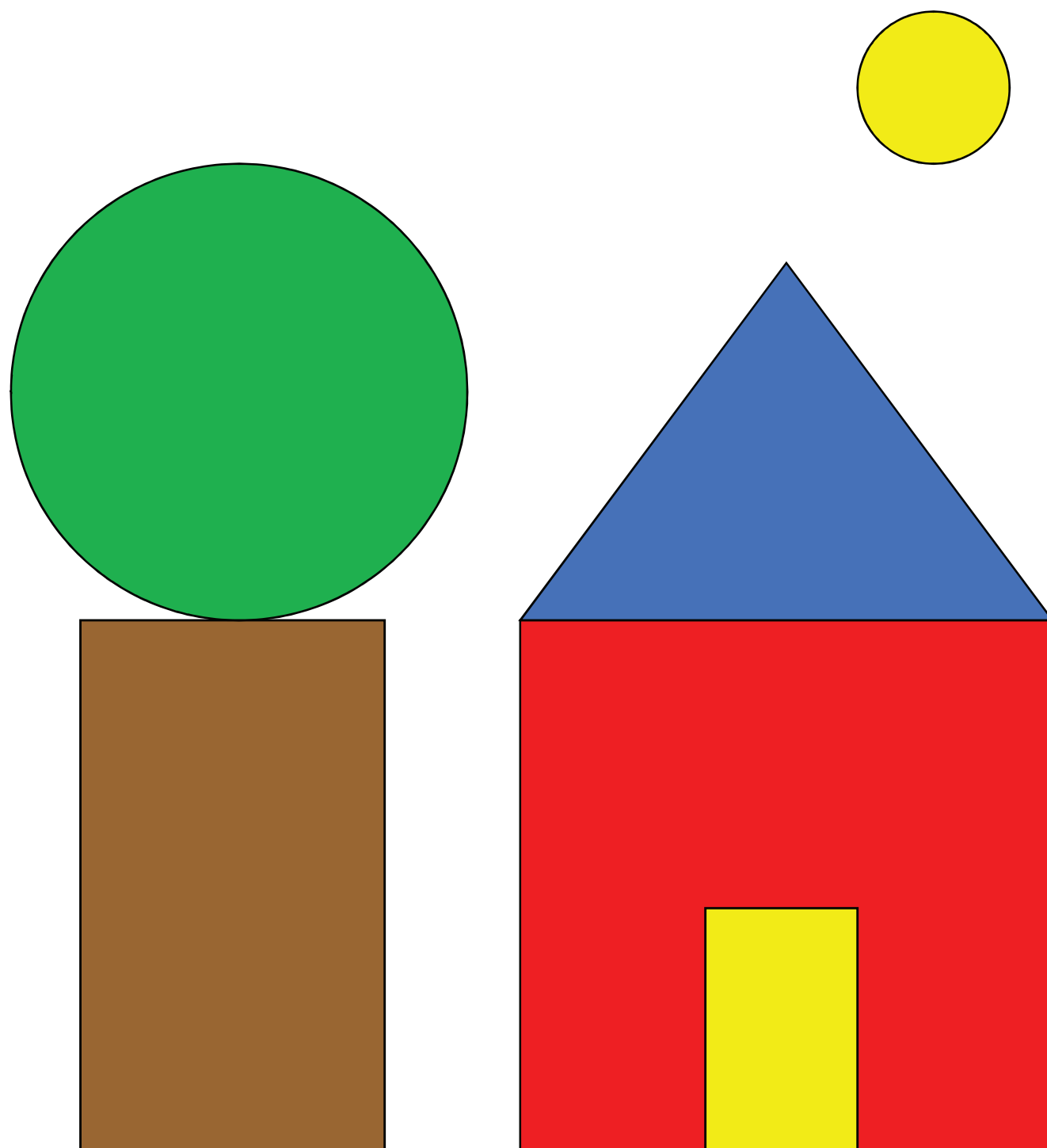
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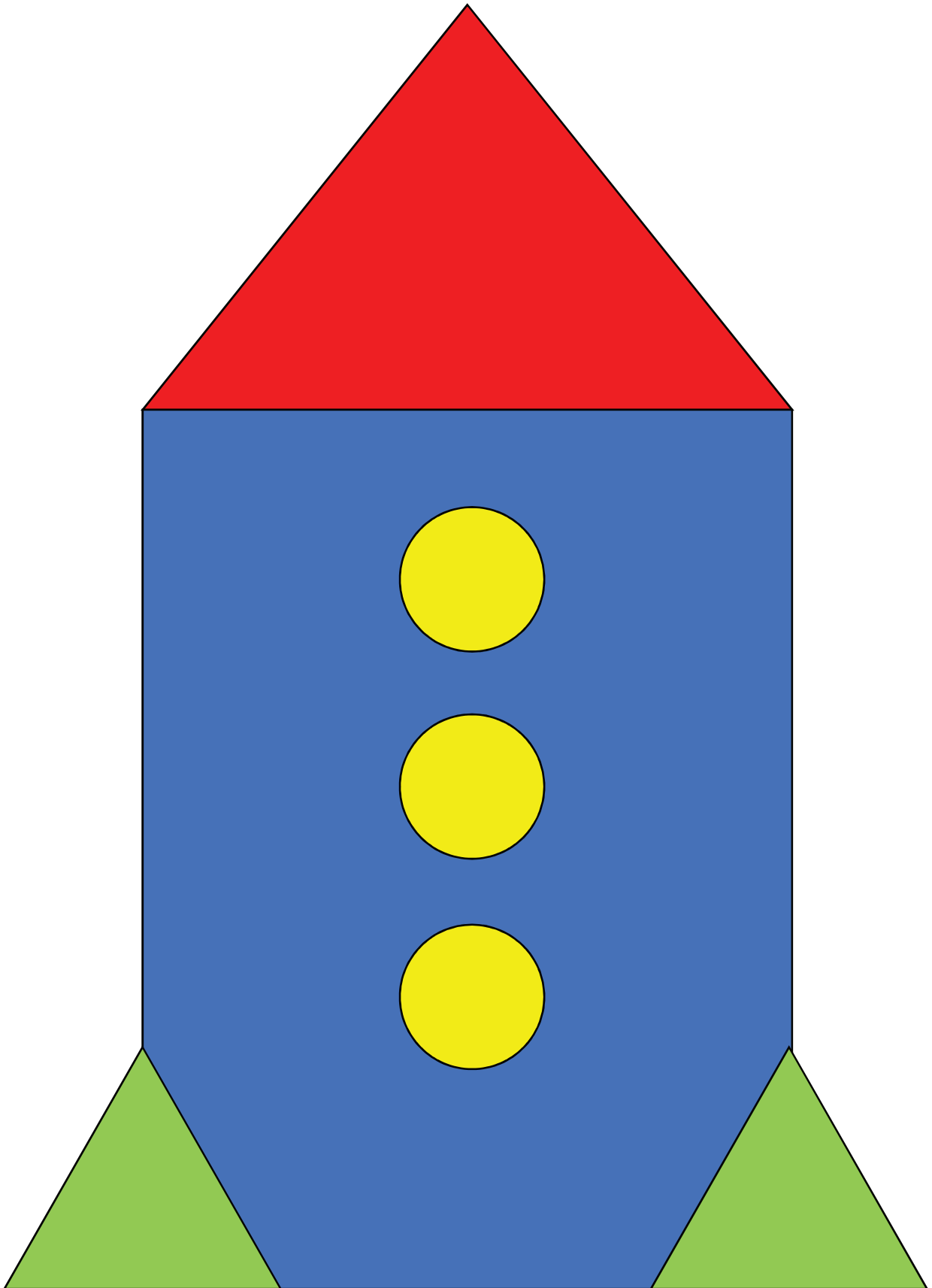
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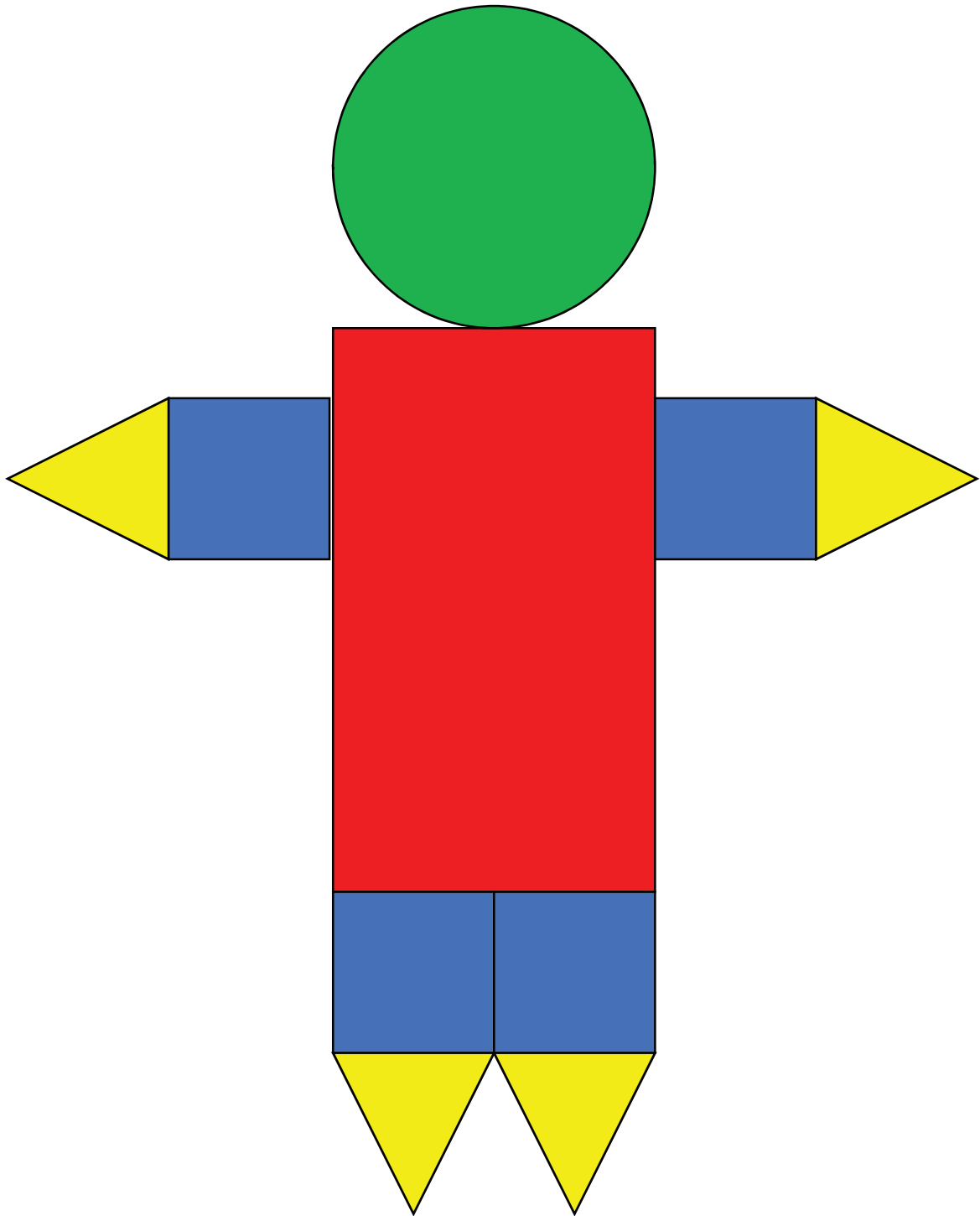
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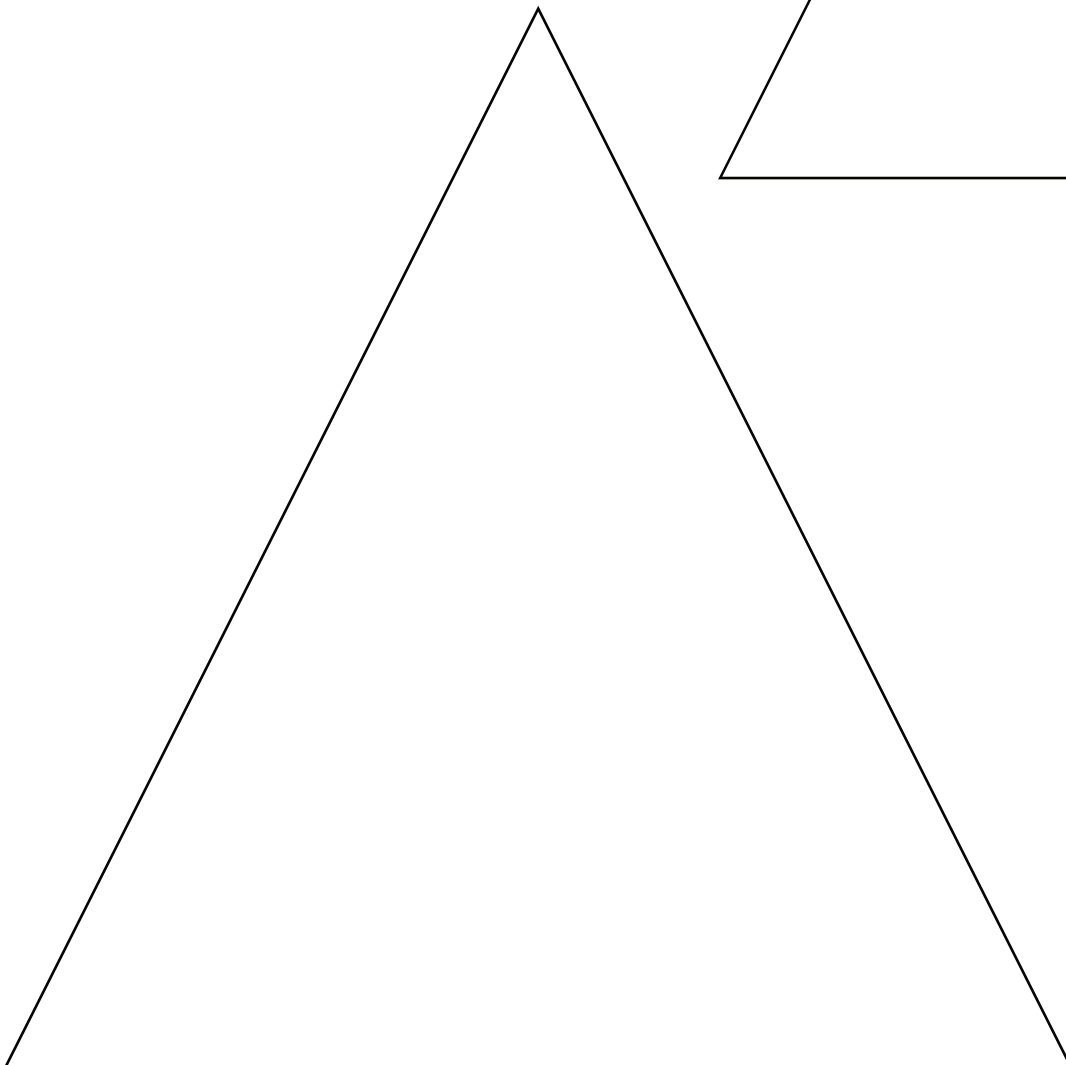
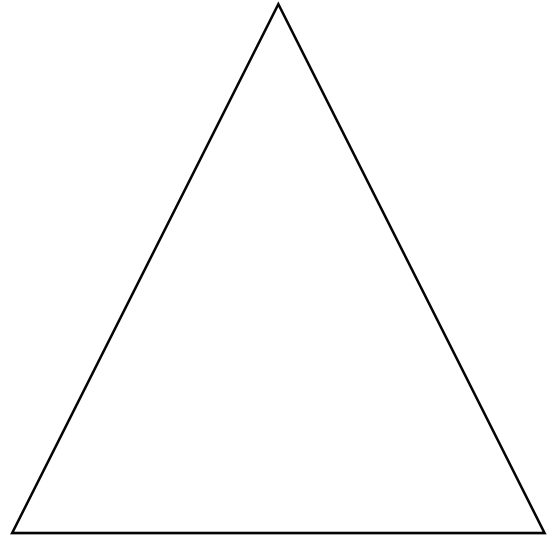
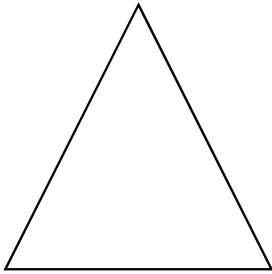
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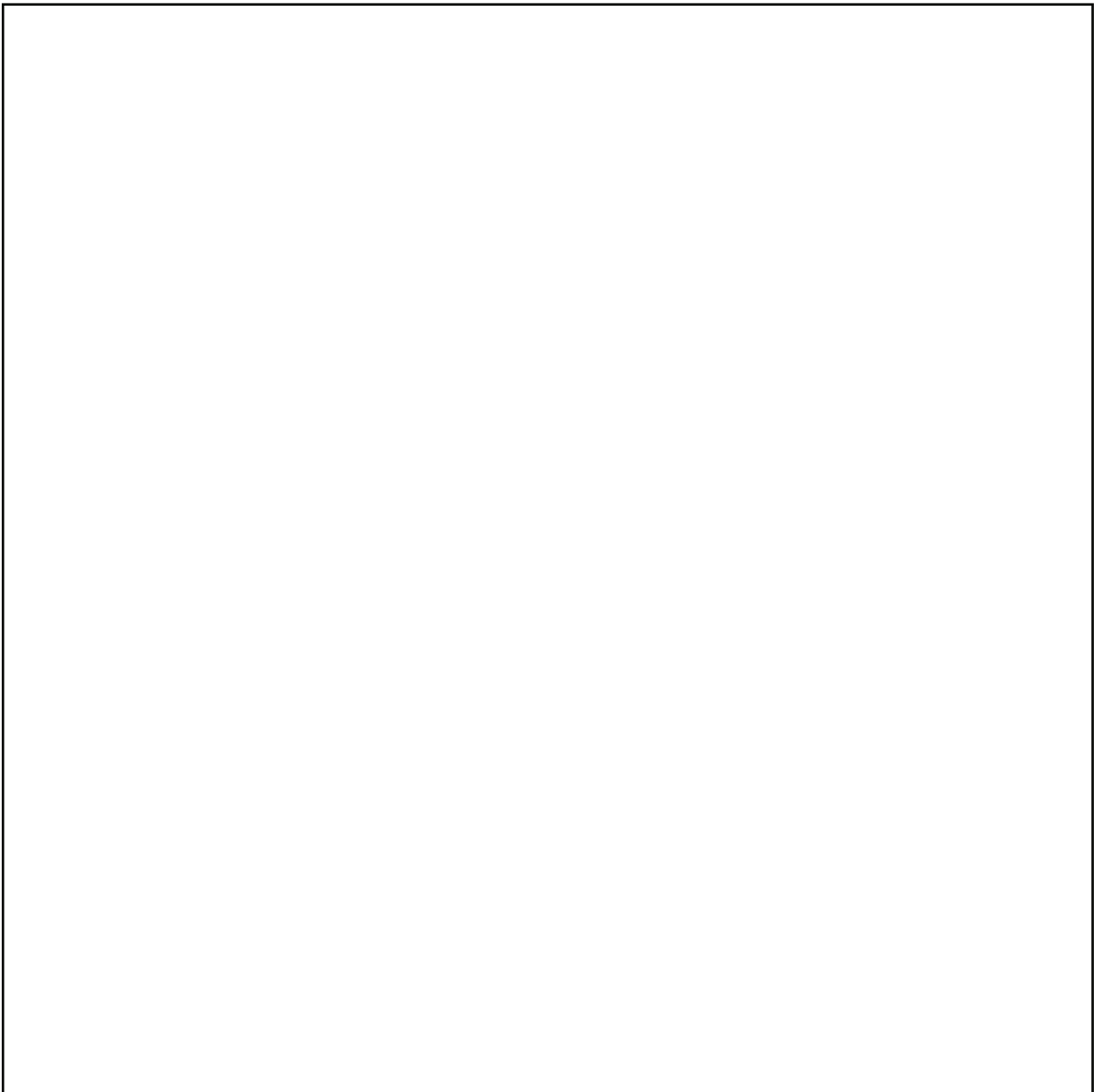
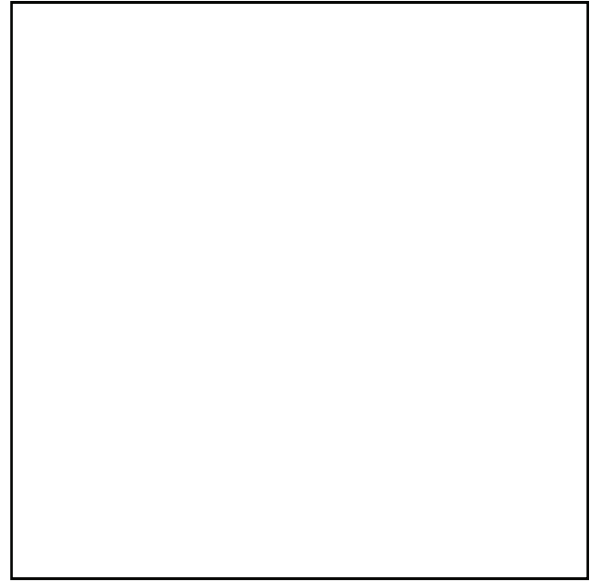
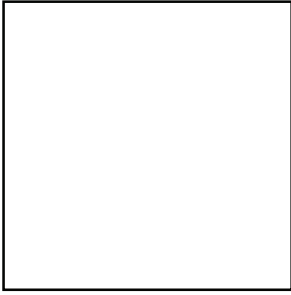


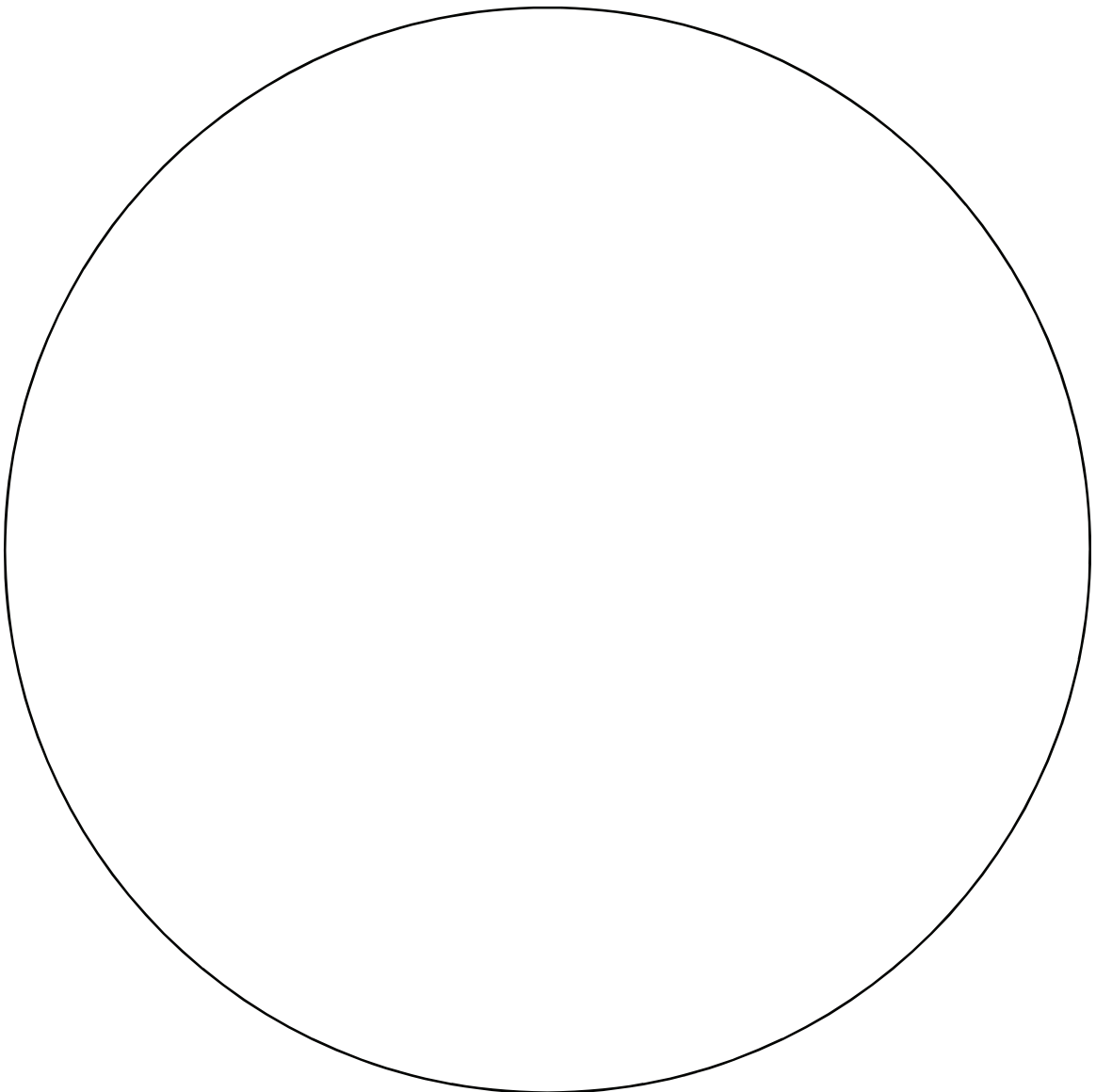
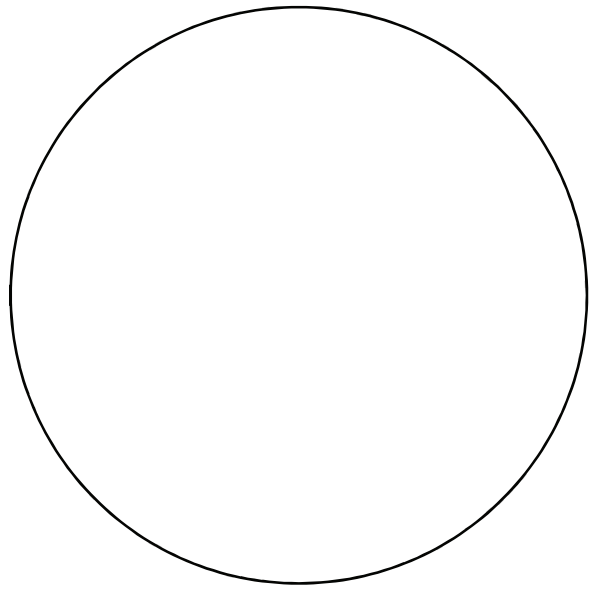
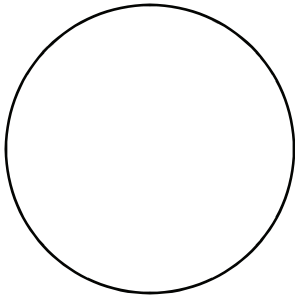
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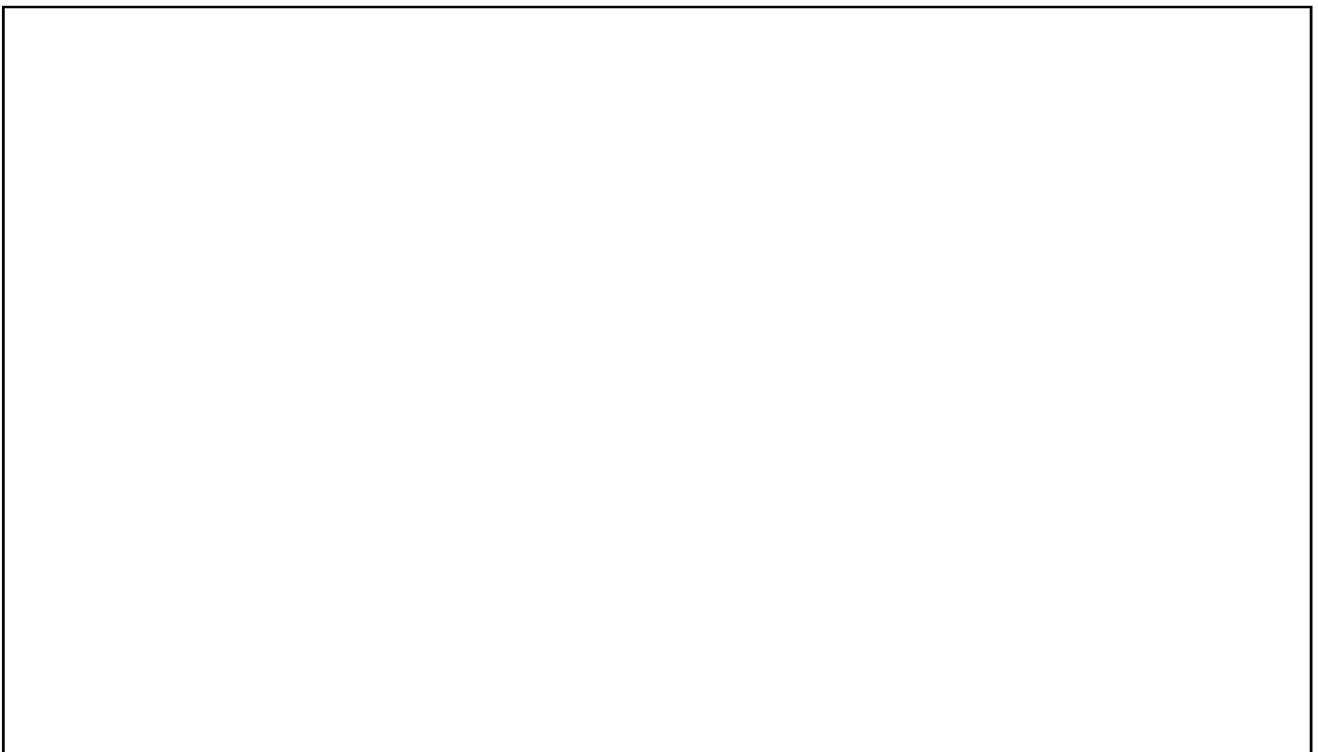
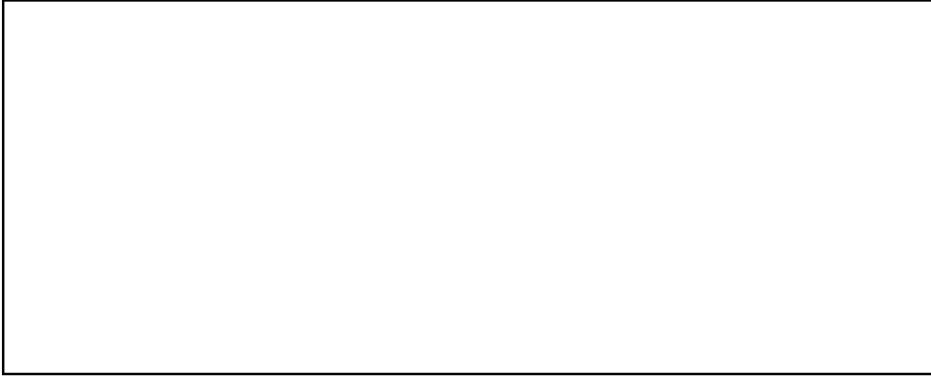


Shape Store Shapes and Prices



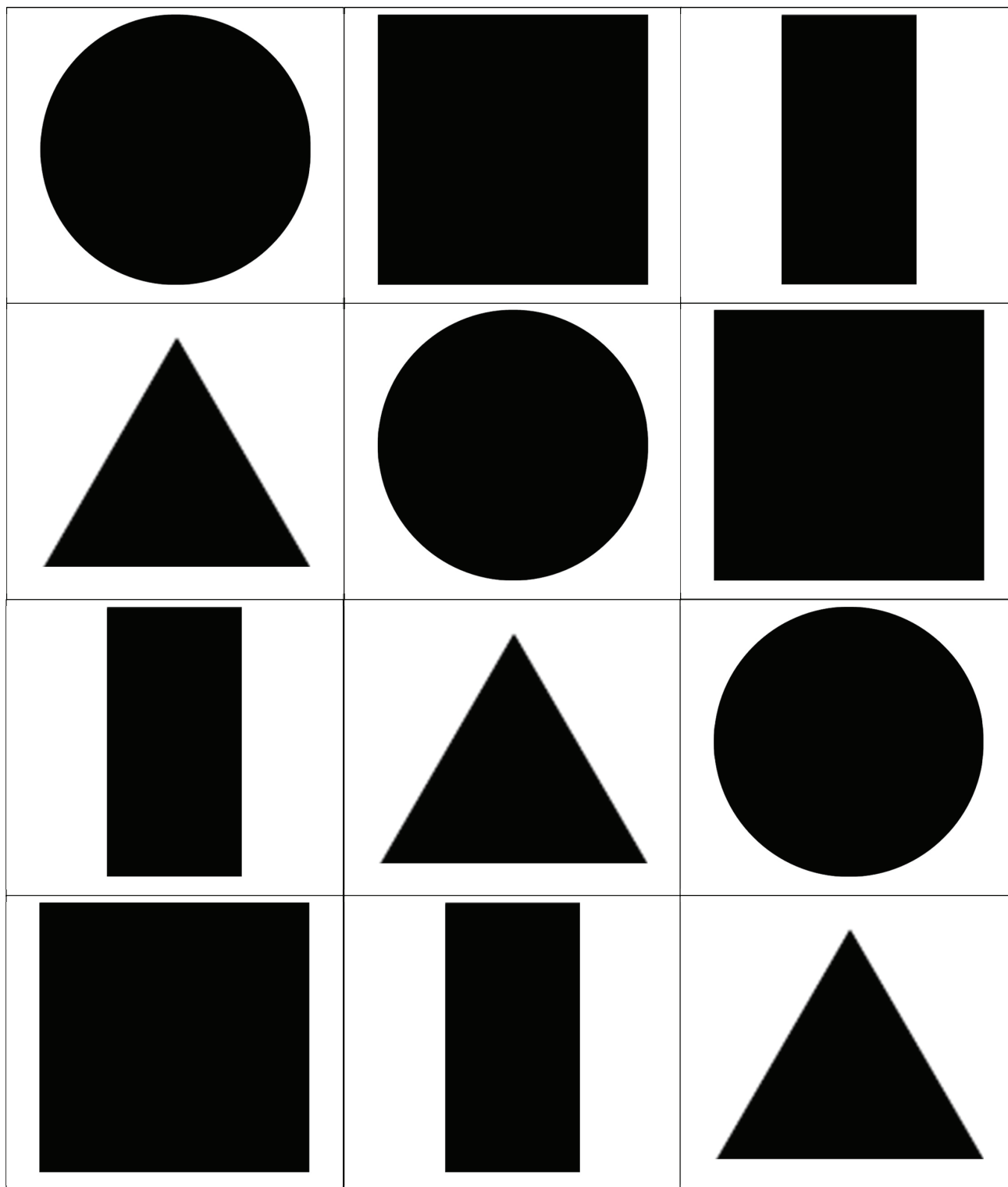






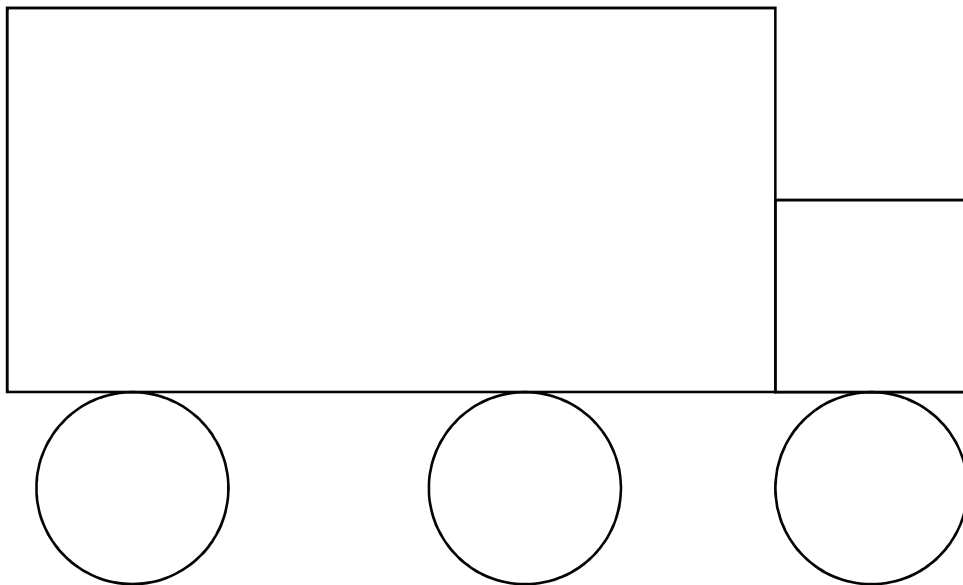
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1 LE	5 LE	10 LE

Student Shape Cards (3 sets)

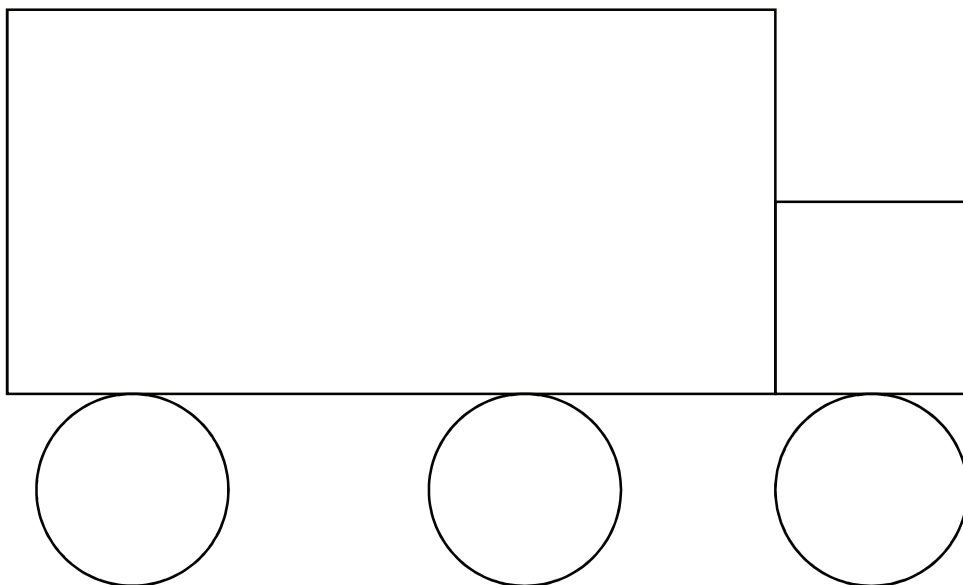


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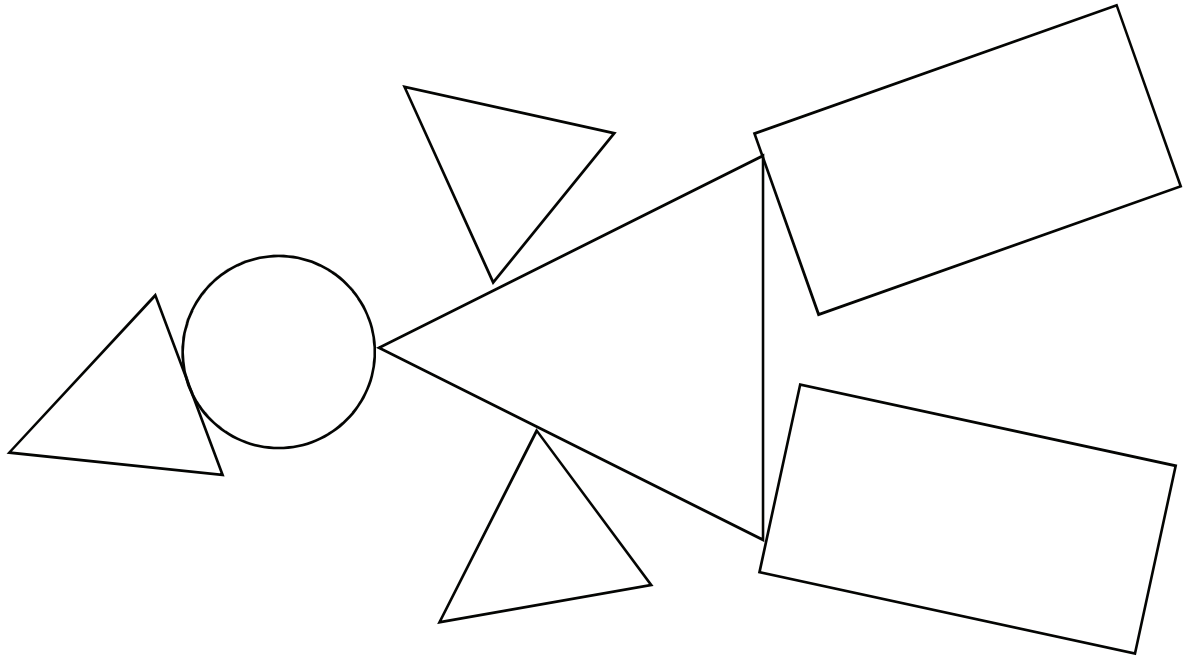
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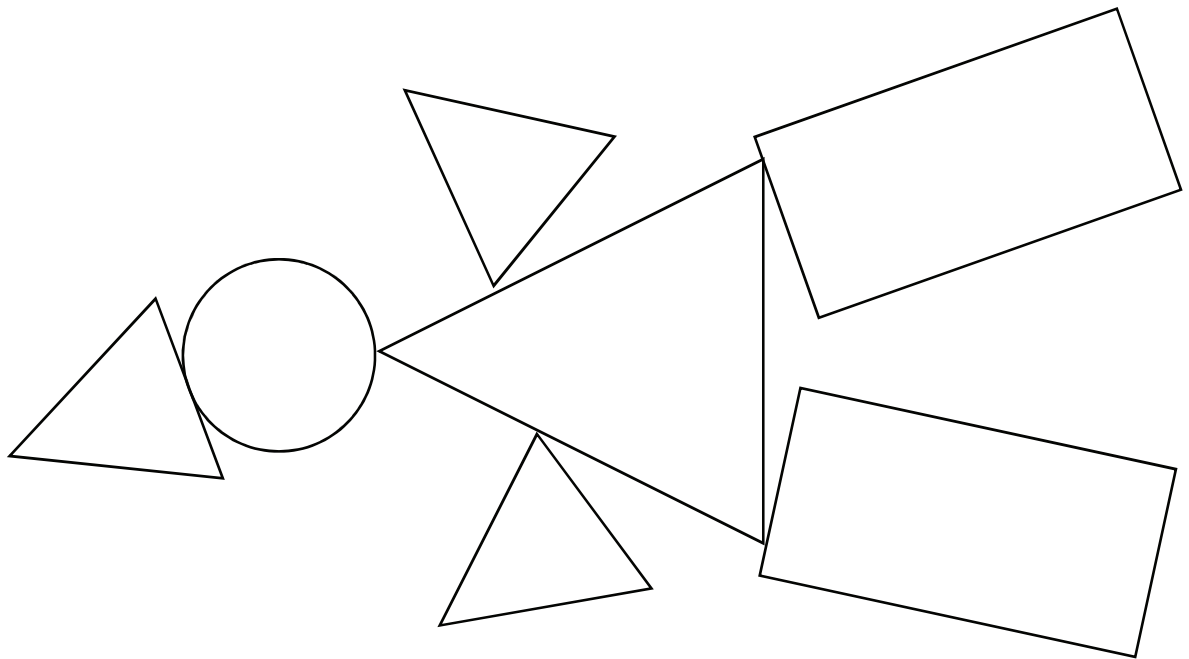
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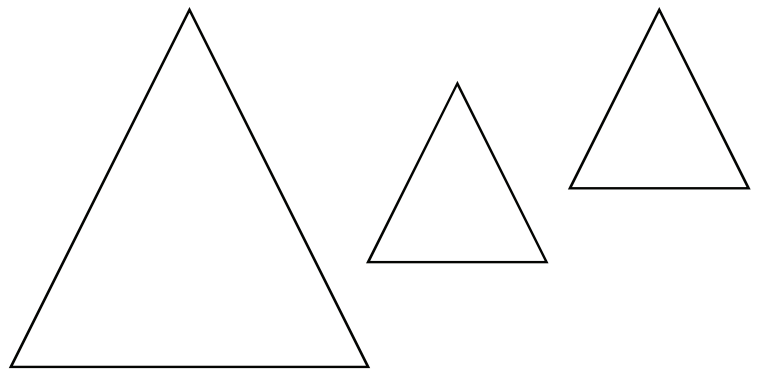
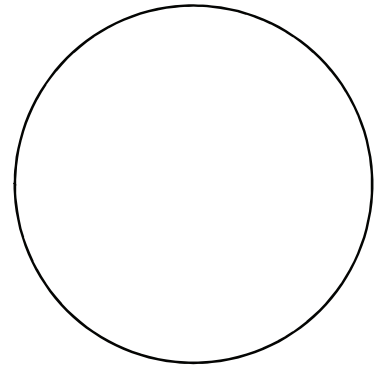
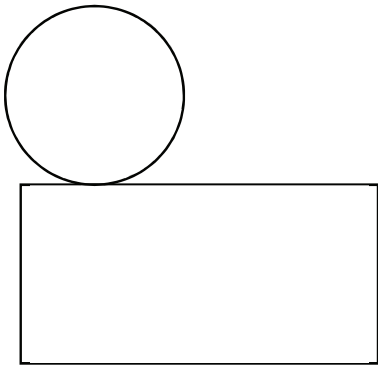
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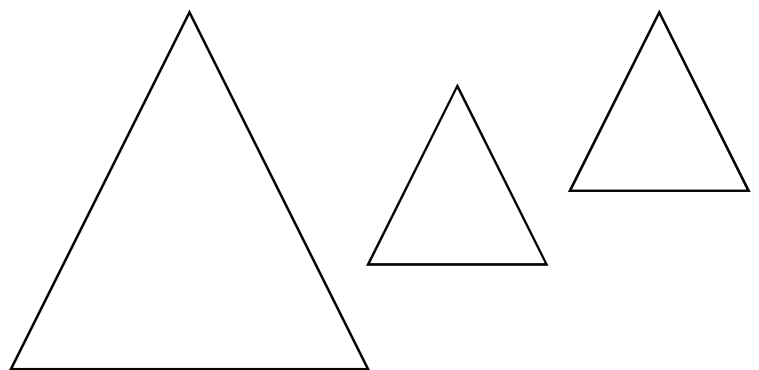
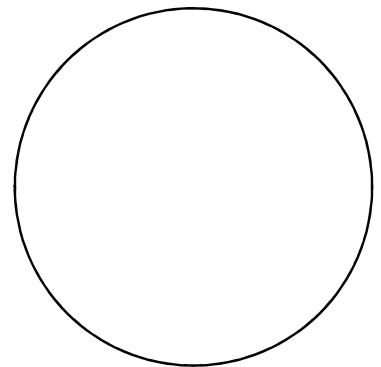
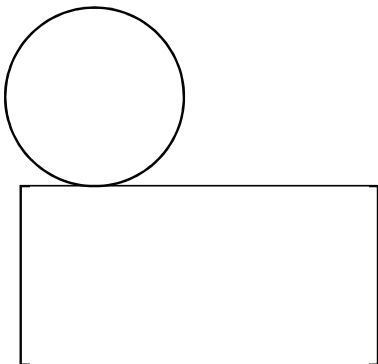
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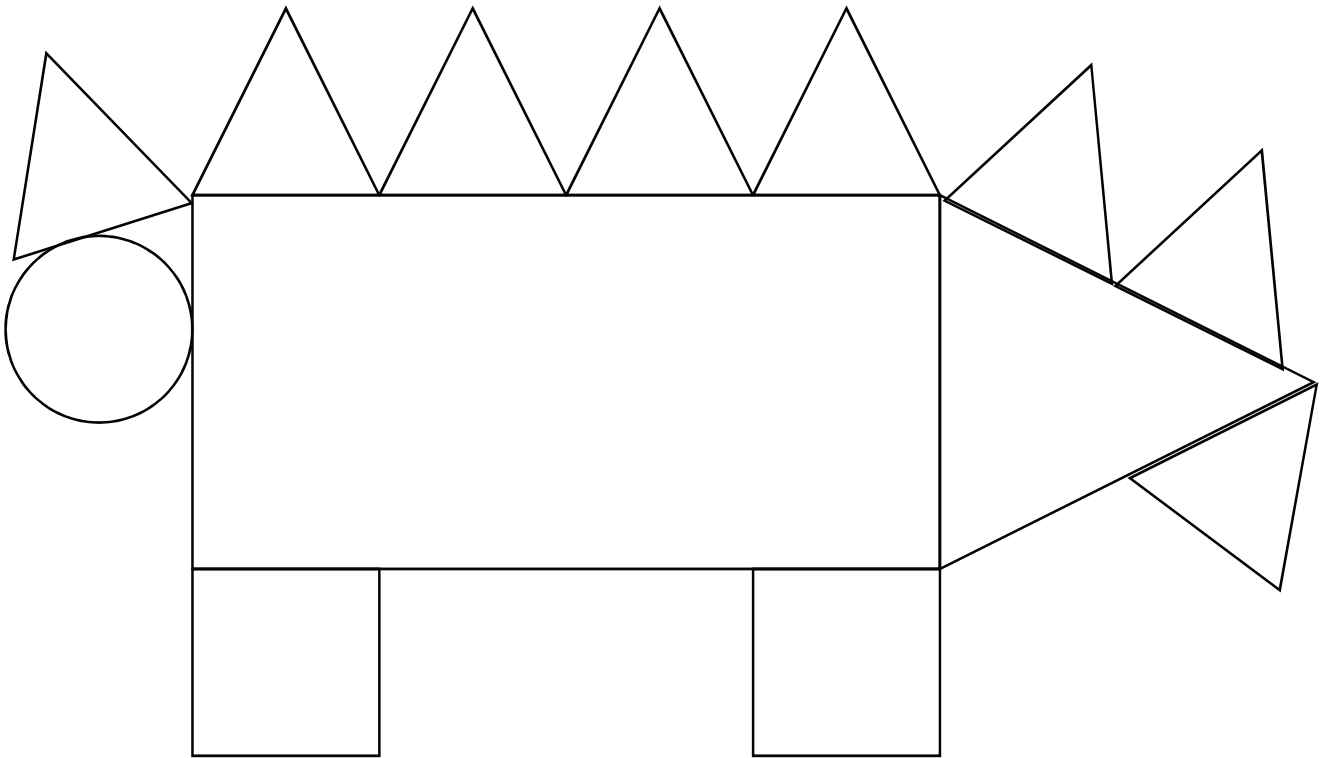
Sphinx and Pyramids at Giza



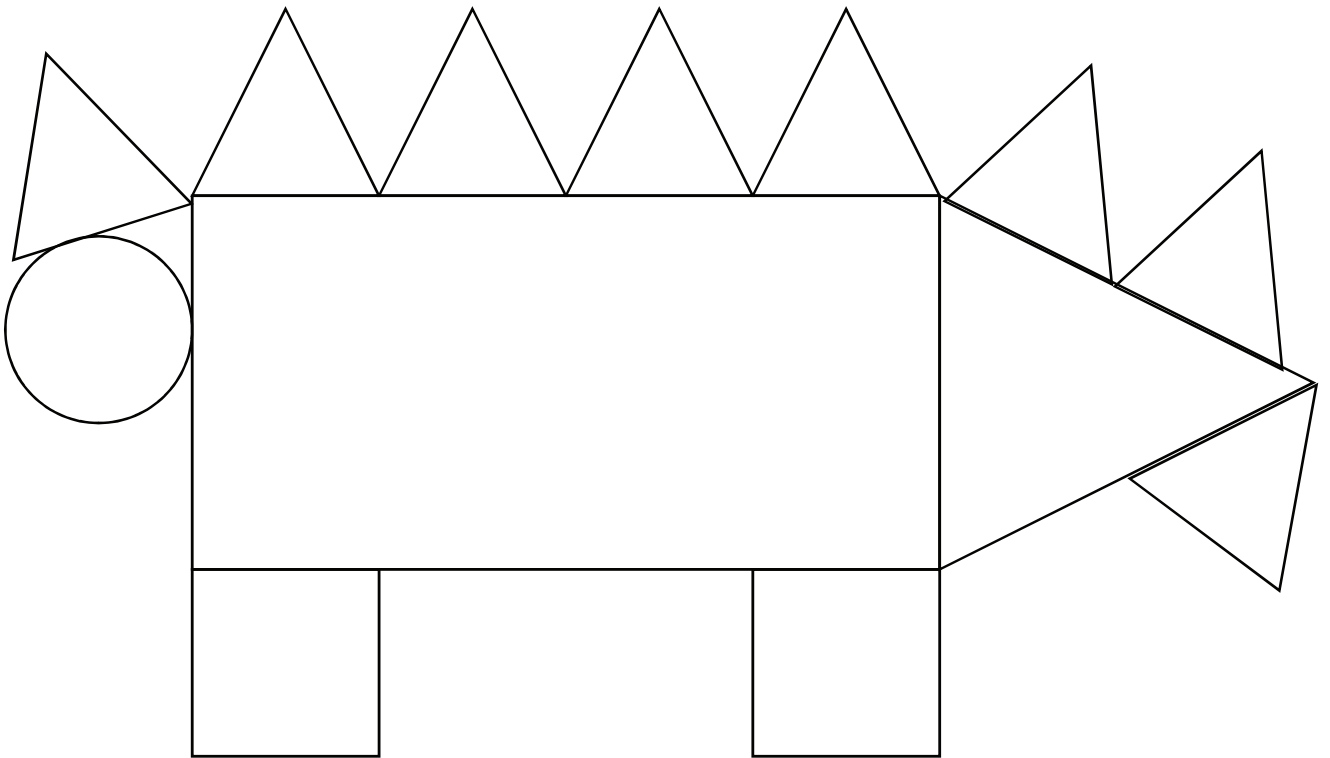
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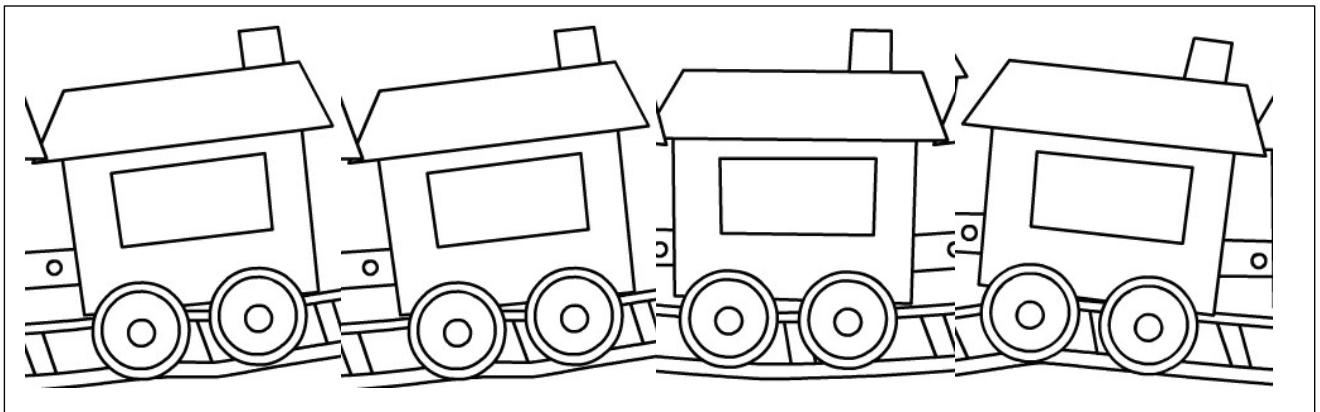
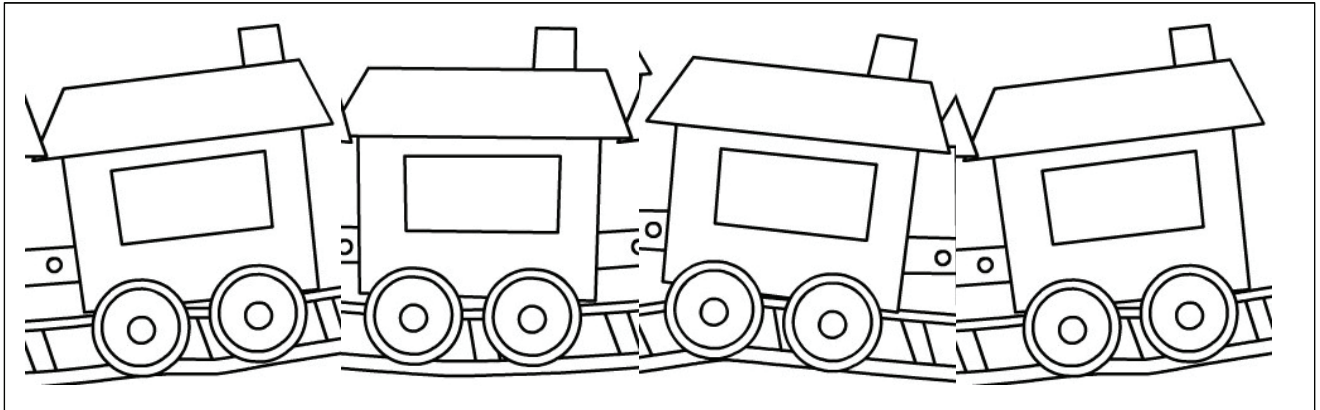
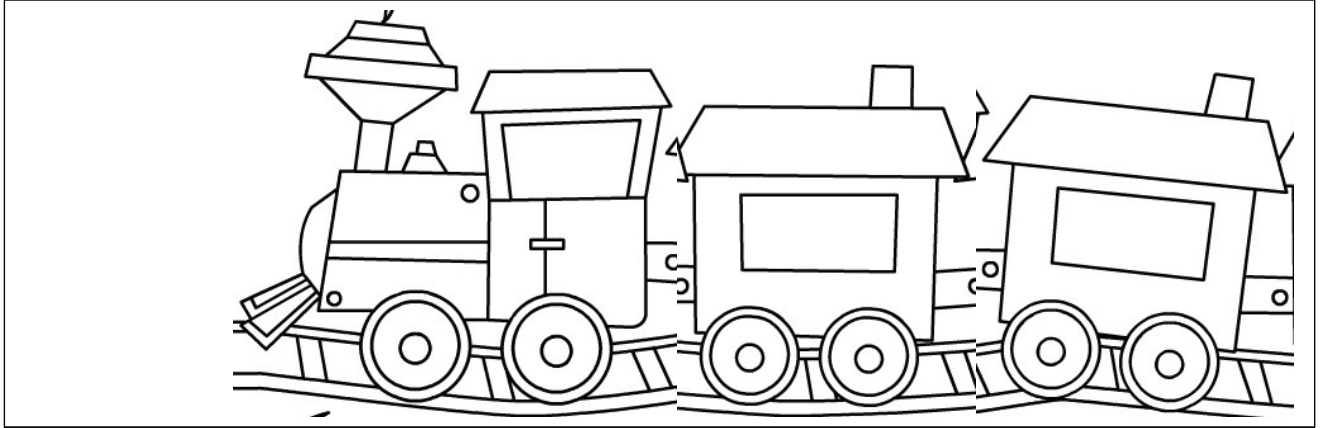
Dinosaur



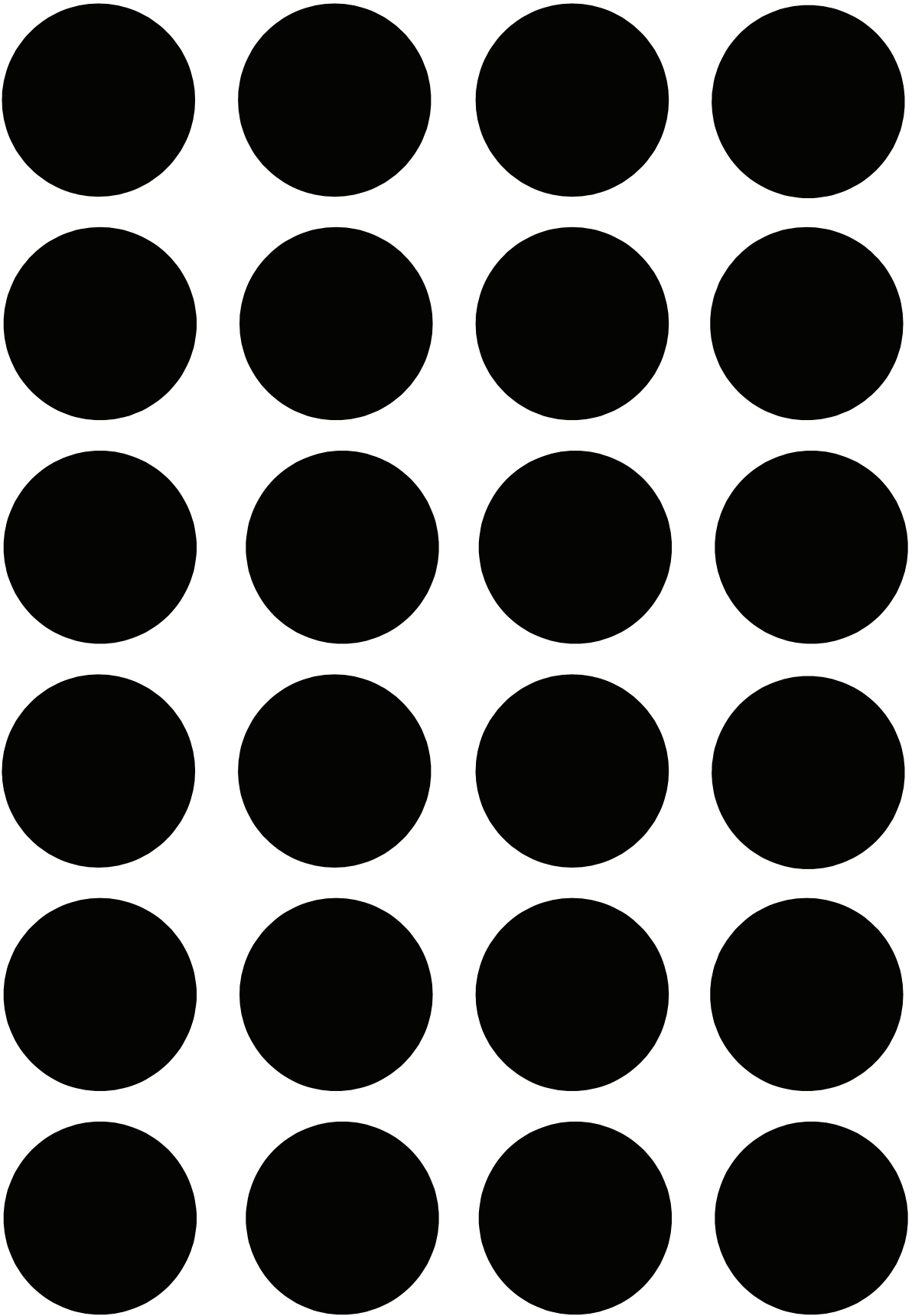
Dinosaur



Student Train Card Template

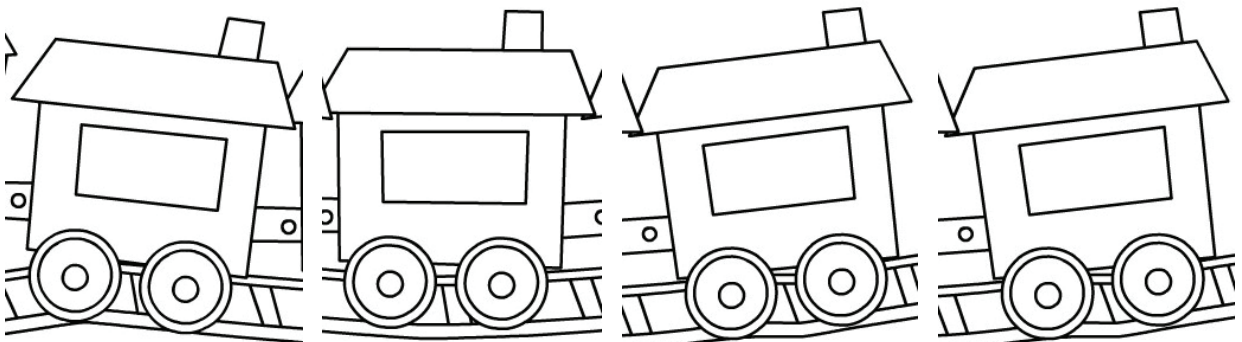
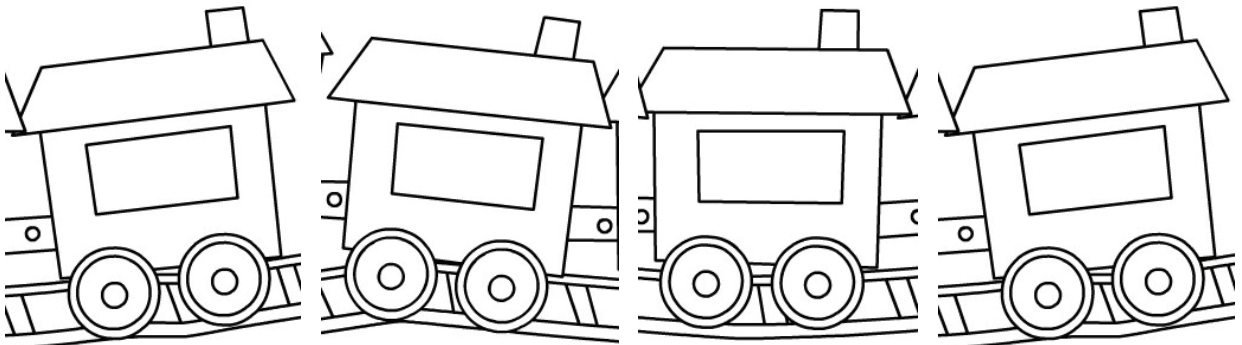
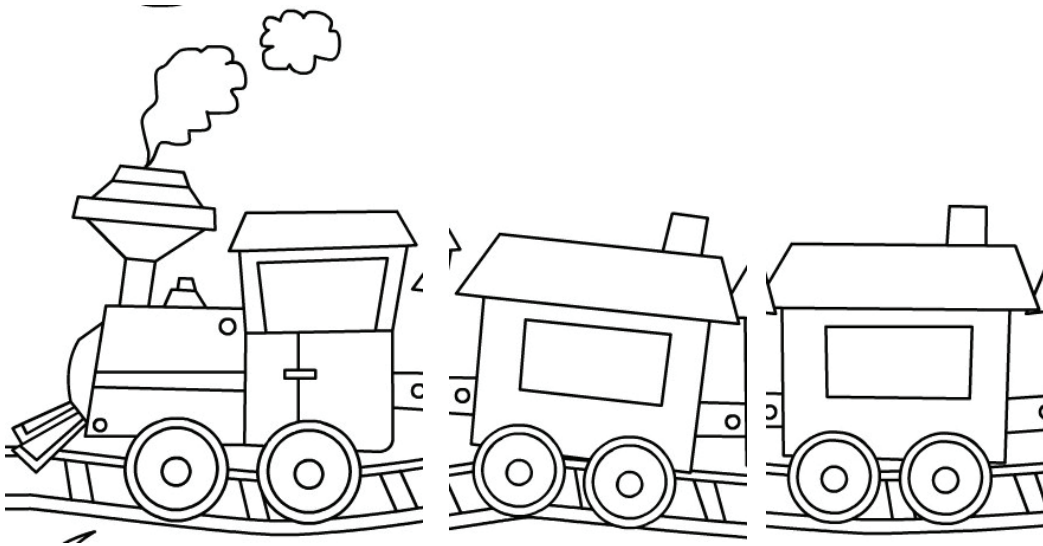


Ten Frame – Large



Ten Frames

Train Card Template



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Egyptian Knowledge Bank
بنك المعرفة المصري

